# EPA Registration Number 70506-230 vol. 1 - part 2

# ISB'S Front-end PRIA Completeness Screen Draft 3; 10/25/07

EPA	Receipt Date: DEC 2 2 2009	EPA Reg. Number: 7	0500	5-E	GN
	Check List Iten	a de la constitución de la const	Yes	No	N/A
i	Has the PRIA Fee been Paid; is a copy of the check or Pay.gov receipt included in the Submission Package?				
2	Is an Application Form (EPA Form 8570-1) Included in the Submission Package, is it completely filled out and signed including package type?				
3	Is a Confidential Statement of Formula (EPA Form 8570- 29) Included in the Submission Package, is it completely filled out and signed (boxes 1-21)?		X		
4	Is a Formulator's Exemption Statement (EPA Form 8570- 27) Included in the Submission Package?			*	
5	Is a Certification with Respect to Citation of Data (EPA Form 8570-34) Included in the Submission Package?		1		
6	Is a Data Matrix (EPA Form 8570-35) Included in the Submission Package?		X		
7	Is a Label Included in the Submission Package?		X		
8	Are Data Included in the Submission	Package?	X		
9	Is the Submission an Amendment?			K	

11 Notification 11 Acceptable

UP-End Hydrocap Herbicide label 12/11/12

Page 1

GROUP

3

HERBICIDE

# **UP-End Hydrocap Herbicide**

For Preemergent Weed Control in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT	
pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2, 6-dinitrobenzenamine	38.7%
OTHER INGREDIENTS:	
TOTAL	100.0%
(1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous carrier	:)

#### KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	<ul> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



United Phosphorus, Inc 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 1-800-247-1557 EPA Reg. No. 70506-230 EPA Est. No.

Net Contents

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### Personal Protective Equipment (PPE):

Some materials that are chemically resistant to these products are listed below. For more options, refer to Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

Follow manufacturer's instruction for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

Users should:

- · Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- · Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as
  possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

#### DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

Do not apply this product through any type of irrigation system.

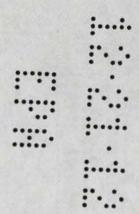
UPI does not authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

Do not apply UP-END Hydrocap herbicide in greenhouses, shadehouses or other enclosed structures.

Not for use for commercial seed production.



#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- · Coveralls
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

#### MODE OF ACTION

UP-End Hydrocap Herbicide is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

#### PRODUCT INFORMATION

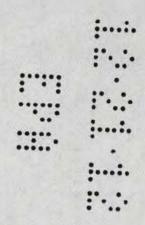
[Note to reviewer: words in italics and brackets are optional alternate competitor product names to be used with one of the UPI alternate brand names].

APPLICATION USE SITES - for preemergence control of grasses and certain broadleaf weed species as they germinate.

Turfgrass sites (golf course, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas, such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.



Formatted: Font: 12 pt, Italic

Formatted: Font: 12 pt, Italic

Formatted: Font: 12 pt, Italic

Page 4

Bulb plantings, non-bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants.

In and around field, liner and container ornamental production.

#### APPLICATION INSTRUCTIONS

UP-End Hydrocap Herbicide will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use UP-End Hydrocap together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of UP-End Hydrocap will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-End Hydrocap is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, UP-End Hydrocap or UP-End Hydrocap tank-mix combinations will not cause crop injury. Over-application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-End Hydrocap.

#### MIXING INSTRUCTIONS

UP-End may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to UP-End Hydrocap alone.

When using tank mixtures or sequential applications with UP-End Hydrocap, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

#### Mixing Instructions

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing UP-End Hydrocap or UP-End Hydrocap tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

#### 2. UP-End Hydrocap herbicide

When using UP-End Hydrocap alone, add UP-End Hydrocap to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

#### 3. UP-End Tank Mixes

Add the tank mixture ingredients in the order listed below before adding UP-End Hydrocap:

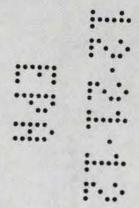
- (a) Wettable Powder (WP) formulations make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations add the F formulation to the partially filled tank while agitating.
- (d) Add UP-End to the partially filled tank while agitating.
- (e) Water Soluble Concentrate (WSC) formulations add the WSC formulation to the partially filled tank while agitating.
- (f) Emulsifiable Concentrate (EC) formulations add the EC formulation to the partially filled tank while agritating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

#### 5. BACKPACK SPRAYER

Begin with a clean spray tank. Fill the spray tank one-half full with clean water and add the required amount of UP-End Hydrocap. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure



mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

#### 6. LIQUID FERTILIZERS

Before mixing, always test small quantities using a simple jar test. Add the required amount of UP-End Hydrocap to a half filled spray tank while agitating, then add the fertilizer product. Complete filling spray tank to desired level.

#### SPRAYING INSTRUCTIONS

#### GROUND APPLICATIONS

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area, using a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turfgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those listed. Do not apply when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. If contact occurs, rinse immediately with water to avoid staining. Do not mechanically scrub until the surface area is thoroughly rinsed. Allow treated turfgrass to dry before entering to avoid staining onto non-treated surfaces.

#### AERIAL APPLICATIONS

Apply uniformly in 5 or more gallons of water per acre. Take care to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. To avoid overlapping and possible crop injury, use a flagman or an automatic mechanical flagging unit on the aircraft.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipmentand weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Observe more stringent state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows
  produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower
  pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of
  increasing pressure.
- · Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower
  spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back
  produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog, however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

#### WEED SPECIES CONTROLLED

UP-End Hydrocap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-End Hydrocap may be used together with herbicides registered for postemergence use (i.e. Roundup [glyphosate] or Finale [glufosinate]) for the control of established weeds. Do not apply sprays containing Roundup [glyphosate] or Finale [glufosinate]over the top of desirable plants. A UP-End Hydrocap treatment may be followed by any registered herbicide to control weeds not listed on the UP-End Hydrocap label.

The efficacy of UP-End Hydrocap will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if UP-End Hydrocap is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End Hydrocap at the above-specified rates.

#### GRASSES CONTROLLED

Common Name	Scientific Name
Bamyardgrass	Echinochloa
	crus-galli

Bluegrass, Annual	Poa annua
Crabgrass	Digitaria spp.
Crowfootgrass	Dactyloctenium
	_acgyptium
Foxtail, Giant	Setaria faberi
Foxtail, Green	Setaria viridis

Foxtail, Yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaltata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, Browntop	Panicum fasciculatum
Panicum, Fall	Panicum
	dichotomiflorum
Panicum, Texas	Panicum texamum
Sandbur, Field	Cenchrus incertus
Signalgrass	Brachiaria
	platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa
BROADLEAF WEEDS CO	
Common Name	Scientific Name
Burweed, Lawn	Soliva pterosperma
Carpetweed	Mollugo verticillata
Chickweed, Common	Stellarja media
Chickweed, Mouseear	Cerastium vulgatum
Clover, Hop	Trifolium procumbens
Cudweed	Gnaphalium spp.
Eveningprimrose	Oenothera biennis
Fiddleneck	Antsinckia intermedia
Filaree	Erodium spo.
Henbit	Lamium amplexicante
Knotweed prostrate	Polygonum aviculare
Kochia	Kochta scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus spo.
Puncturevine	Tribulus terrestris
Purstane	Portulaça oleracea
Pusley, Florida	Richardia scabra
Rocket London	Sisymbrium irio
Shepherdspurse	Capsella burra partoris
Company of Description	bursa-pastoris
Smartweed, Pennsylvania	Polygonum pensylvanicum
Sandard Com	
Speedwell, Corn	Veronica arvensis
Spurge, Annual	Euphorbia spp.
Spurge, Prostrate	Euphorbia humistrata
Woodsorrel, Yellow	Oxalis stricta
Velvetleaf (Buttonweed)	Abutilon theophrasti

Page 7

# Table 1. RESIDENTIAL RESIDENTIAL GOLF COURSE COMMERCIAL AND OTHER NON-RESIDENTIAL TURFGRASS USES

Application Rates For Preemergence Weed Control

		P-END Hydrocap h	erbicide'		
Turfgrass Species	Weeds	fl. oz.	pints	Comments	
		Product per 1,000 sq.ft.	Product per acre		
COOL SEASON G					
Bluegrass, Kentucky	Barnyardgrass		Turf Uses:	Make a repeat	
Fescue, Fine Fescue, Tall Ryegrass, Perennial	Crabgrass Evening Primrose Fall Panieum Foxtail Hop Clover Knotweed Oxalis Poa amma	Initial application before weed germination in spring.  Ping and Sod Farm Turf Uses Only <sup>2</sup> :  Initial application before weed germination in spring.		application of 2.2 to 3.1 pints/A (0.86 to 1.1 oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Prostrate Spurge Purslane Goosegrass			Make a repeat	
				application of 3.1	
	1000	Golf Course, Con	3.1 to 4.2 pints nmercial and Other Non- d Turf Uses Only:	pints/Acre (1.1 oz/1000 sq. ft.) if the lower rate was used initially or for	
		1.1 to 2.3 oz	3.1 to 6.3 pints	extended goosegrass	
		Initial application b	efore weed germination in	control after 5-8 weeks.	
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annual	All Turf Uses:		Apply in late summer or	
		1,1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Apply a repeat application of 3 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) after 5 weeks for extended Po amua control.	
Bentgrass or	Barnyardgrass	All Turf Uses (Non-Greens and Tees):		Make a repeat	
established Poa	Crabgrass Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Poa annua Oxalis Prostrate Spurge Purslane			application of 2.2 to 3.1	
annua <sup>3</sup> (1/2 inch		1.1 fl oz	3,1 pints	pints/Acre (0.86 to 1.1 oz/1000 sq. ft.) after 5-8	
height or taller)		Imitial application b spring.	Initial application before weed germination in spring.		
	Goosegrass	All Turf Uses		Apply a repeat	
		1.1 fl oz	reens and Tees):  3.1 pints	application of 3.1 pts/Acre (1.1 oz/1000 sc	
		Initial application before weed germination in spring.		ft.) for extended goosegrass control after 5-8 weeks.	
	Chickweed Corn Speedwell	All Turf Uses (Non-Greens and Tees):		Apply in late summer or early fall before weed	
	Cudweed Henbit Lawn Burweed Pog amua	1.1 to 1.6 fl oz	3.1 to 4.2 pints	germination.	

	1	JP-END Hydrocap h	erbicide <sup>1</sup>		
Turfgrass Species	Weeds	fl. oz. Product per	Product per acre	Comments	
WARM SEASON GI	DARCEC	1,000 sq.ft.			
Bahiagrass Bermudagrass	ass Barnyardgrass	Residential and Sod Farm Turf Uses Only:		Make a repeat application of 2.2 to 3.1	
Buffalograss	Evening Primrose	1.1 to 1.6fl oz	3.1 to 4.2 pints	pints/Acre (0.86 to 1.1	
Centipedegrass Fescue, Tall	Fall Panicum Foxtail	Golf Course, Commercial and Other Non- Residential Turf Uses Only;		oz/1000 sq. ft.) after 5-8 weeks if necessary.	
Paspalum,	Hop Clover	1.1 to 2.3 fl oz	3.1 to 6.3 pints		
seashore St. Augustinegrass Zoysiagrass	Knotweed Poa annua Oxalis Prostrate Spurge Purslane	Initial application be spring.	efore weed germination in		
	Goosegrass	All Turf Uses (Non-Greens and Tees):		An additional application of 3.1 pt/Acre (1.1	
		1.1 fl oz	3.1 pints	oz/1000 sq. ft.) may be	
		Apply before weed germination in spring.		made for extended	
		Make a second appl oz/1000 sq.ft.) 5-8 v	lication at 3.1 pints (1.1 weeks later.	goosegrass control 8 weeks after the second application.	
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annua	All Turf Uses:		Apply in late summer or	
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Make a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) 5-8 weeks for extended <i>Poa</i> amus a control.	

Do not use more than 4.2 pints (2.1 quarts) <u>per acre per application</u> on residential and sod farm turfgrass. Do not use more than 6.3 pints (3.1 quarts) <u>per acre per application</u> on golf course turfgrass, commercial or other non-residential turfgrass.

The efficacy of **UP-End Hydrocap** is best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **UP-End Hydrocap** is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is undesirable, <u>Do not rub or scrub surface</u>, <u>but rinse area immediately using a heavy spray of water</u> to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non-treated surfaces.

#### TURFGRASS TANK MIXES

UP-End Hydrocap can be mixed with postemergence herbicides to control emerged weeds in non-residential turfgrasses. For annual grass control, applications can be made with DRIVE\* [Phoenix Rook®] or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2-4,D *[Phoenis TernSivle]* and other similar products. Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End Hydrocap and follow those that are most restrictive.

#### TURFGRASS RESTRICTIONS

Formatted: Font: Italic
Formatted: Font: Italic
Formatted: Font: Italic

Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.

Not for use on bentgrass or Poa annua greens or tees.

- Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application.
- On newly planted areas, do not apply until the turfgrass has filled in and has been mowed at least four times.
   Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.
- · Do not use on bentgrass or Poa annua greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for at least three (3) months following the last UP-END
  Hydrocap herbicide application.
- · Delay sprigging turfgrass for five (5) months after application.

#### LANDSCAPE AND GROUNDS MAINTENANCE

**UP-End Hydrocap** can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix **UP-End Hydrocap** with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While UP-End Hydrocap may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad-use application is made.

Refer to Table 2. Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

#### ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use UP-End Hydrocap for grounds maintenance in noncropland areas, preemergence control of the weed species listed in and around established tree plantations for site preparation, and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. UP-End Hydrocap may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land. UP-End Hydrocap can also be used in Christmas trees and non-bearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to Table 2. Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas.

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent UP-End Hydrocap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on Instructions and Restrictions in Landscape and Ornamental Plantings before making an application.

For postemergence control of weeds, use tank-mix combinations of UP-End Hydrocap plus VANTAGE®, Roundup®, Finale®, Iglufosinatel. or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both UP-End Hydrocap and partner herbicides before use. Take care to prevent combination sprays from direct contact with desirable foliage or injury may result. UP-End Hydrocap plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict UP-End Hydrocap usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

#### ORNAMENTAL BULBS

UP-End may be applied for control of susceptible annual weeds in ornamental bulbs listed under the Perennial Section on the label (crocus, daffodil [narcissus], gladiolus, lilies, tulip, etc.). Apply UP-End Hydrocap before, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

#### WILDFLOWERS

UP-End Hydrocap herbicide may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (\*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of UP-End Hydrocap at 4.2 pints (2.1 quarts) per acre. UP-End Hydrocap may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply UP-End Hydrocap no

Formatted: Font: Italic

Page 11

sooner than 4 weeks after wildflowers have emerged but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before making an application.

Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to UP-End Hydrocap may vary greatly. Test desirable species carefully to determine if area-wide applications can be made.

#### NON-BEARING FRUIT AND NUTCROPS AND VINEYARDS

UP-End Hydrocap may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Citrus Olive Pistachio
Apple Fig Peach Plum
Apricot Grape Pear Prune
Cherry Nectarine Pecan Walnut, English

#### NON-CROPLAND WEED CONTROL

Use UP-End Hydrocap herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

#### INDUSTRIAL (UNIMPROVED) TURF

UP-End Hydrocap will provide preemergence control of the annual grasses and broadleaf weeds listed in Weed Species Controlled section of this label that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D [Phoenix TernStyle], DRIVE\* [Phoenix Rook], VANTAGE\*, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

#### TOTAL VEGETATION CONTROL

UP-End Hydrocap may be tank mixed with ARSENAL\*, SAHARA\*, PLATEAU\*, VANTAGE\*, Roundup\*
PRO, Karmex\*, Finale\* felufosinatel, Oust\*, diuron, glyphosate felufosinatel for other products to provide bare ground, or total vegetation control. UP-End Hydrocap can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with ARSENAL, SAHARA or PLATEAU herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For Kochia control, use a combination of UP-End Hydrocap with ARSENAL herbicide or diuron if control has been a problem for other herbicides.

### TABLE 2. APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS, AND OTHER NONCROP AREAS\*

For preemergence control of the weed species listed, apply UP-End Hydrocap as follows:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 1 instructions.

For extended weed control, repeat applications of UP-End Hydrocap can be made.

#### INSTRUCTIONS AND RESTRICTIONS

#### LANDSCAPE AND ORNAMENTAL PLANTINGS1

ACCUMANTAL AND				
Site	Application Instructions and Restrictions			

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/ Subscript

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic

Formatted: Font: Italic

Do not apply to newly-transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.		
Apply as a directed or over-the-top spray.		
<ol> <li>Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.</li> </ol>		
UP-End Hydrocap may be applied to bulb species listed on the label.		
2. Apply before, during or after bulb emergence, but not during bloom.		
<ol> <li>UP-End Hydrocap may be applied in plantings of wildflowers listed on the label. Refer to specific instructions for rate and plant tolerance.</li> </ol>		
For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.		

<sup>&</sup>lt;sup>1</sup> Plant only those desirable plant species listed on this label into soil treated the previous season with **UP-End Hydrocap** or injury may occur.

#### HAND-HELD SPRAY EQUIPMENT:

Use table 2 above to determine the amount of UP-End Hydrocap to be applied per 1000 square feet, in sufficient water for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-End Hydrocap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any necessary cultivation must be shallow. UP-End Hydrocap may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants. A UP-End Hydrocap treatment may be followed by any registered herbicide to control weeds not listed on the UP-End Hydrocap label.

The efficacy of **UP-End Hydrocap** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **UP-End Hydrocap** is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End Hydrocap herbicide at the above-specified rates:

#### GRASSES CONTROLLED

Common Name	Scientific Name	
Barnyardgrass	Echinochloa crus- galli	
Bluegrass, Annual	Poa annua	
Crabgrass	Digitaria spp.	
Crowfootgrass	Dactyloctenium aegyptium	
Foxtail, Giant	Setaria faberi	
Foxtail, Green	Setaria viridis	
Foxtail, Yellow	Setaria glauca	
Goosegrass	Eleusine indica	
Itchgrass	Rottboellia exaltata	
Johnsongrass (from seed)	Sorghum halepense	
Junglerice	Echinochloa colona	
Lovegrass (from seed)	Eragrostis spp.	
Panicum, Browntop	Panicum fasciculatum	
Panicum, Fall	Panicum dichotomiflorum	
Panicum, Texas	Panicum texanum	

Sandbur, Field	Cenchrus incertus
Signalgrass	Brachiaria
	platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa

#### BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name	
Burweed, Lawn	Soliva pterosperma	
Carpetweed	Mollugo verticillata	
Chickweed, Common	Stellaria media	
Chickweed, Mouseear	Cerastium vulgatum	
Clover, Hop	Trifolium procumbens	
Cudweed	Gnaphalium spp.	
Evening primrose	Oenothera biennis	
Fiddleneck	Amsinckia intermedia	
Filaree	Erodium spp.	
Henbit	Lamium amplexicaule	
Knotweed, prostrate	Polygonum aviculare	

<sup>&</sup>lt;sup>2</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

<sup>&</sup>lt;sup>3</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

pastoris

	13

Kochia	Kochia scoparia	Smartweed, Pennsylvania	Polygonum
Lambsquarters	Chenopodium album		pensylvanicum
Pigweed	Amaranthus spp.	Speedwell, Corn	Veronica arvensis
Puncturevine	Tribulus terrestris	Spurge, Annual	Euphorbia spp.
Purslane	Portulaca oleracea	Spurge, Prostrate	Euphorbia humistrata
Pusley, Florida	Richardia scabra	Woodsorrel, Yellow	Oxalis stricta
Rocket, London	Sisymbrium irio	Velvetleaf (Buttonweed)	Abutilon theophrasti
Shepherdspurse	Cansella hursa-		

#### COMMERCIAL ORNAMENTAL PRODUCTION

#### GENERAL INFORMATION

Application Use Sites: UP-End Hydrocap can be used in and around field, liner and container ornamental production.

UP-End Hydrocap sprays may be used around and over the top of the established plants listed in Table 4 of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of UP-End Hydrocap. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

#### APPLICATION INSTRUCTIONS

**UP-End Hydrocap** will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment, or **UP-End Hydrocap** may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

The efficacy of UP-End Hydrocap will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-End Hydrocap is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, UP-End Hydrocap or UP-End Hydrocap tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-End Hydrocap.

#### SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water.

#### INSTRUCTIONS AND RESTRICTIONS1 IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses, shadehouses or other enclosed structures.

Site	Application Instructions and Restrictions		
Newly-Transplanted Field-Grown Nursery Stock <sup>2,3</sup>	<ol> <li>Do not make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.</li> </ol>		
	Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where UP-End Hydrocap herbicide could come into contact with the roots.		
	3. DO NOT apply during bud swell, bud break or at time of first flush of new growth.		
	Direct sprays away from graphed or budded tissue on transplants at all times.		
Newly-Transplanted	1. Do not apply until transplants have been watered and soil has been thoroughly packed and		

settled around transplants. Care must be taken to ensure there are no cracks in the soil where UP- End Hydrocap could come into contact with the roots.
For container grown ornamentals, delay first application of the product to bareroot liners for two     (2) weeks after transplanting.
3. Do not apply during bud swell, bud break or at time of first flush of new growth.
Direct sprays away from graphed or budded tissue on transplants at all times.
Do not apply during bud swell, bud break or at time of first flush of new growth.     Apply as a directed or over-the-top spray.
If newly budded or graphed rootstock, make an application using a shielded sprayer.
<ol> <li>Take care to ensure there are no cracks in the soil where UP-End Hydrocap could come into contact with the roots.</li> </ol>
Apply to soil then water in (including mulch, gravel, wood chips, or other permeable base), replace containerized ornamentals onto pad.

- <sup>1</sup> Plant only those desirable plant species listed on this label into soil treated the previous season with UP-End Hydrocap or injury may occur.
- <sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.
- <sup>3</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE®, Roundup® [Phoenix Avocet PLX], Finale® [glufosinate], Ornamec®, Gallery®, Princep®, and other similar products. Do not apply sprays containing Roundup [gluphosate] or Finale [glufosinate] over the top of ornamental plants.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End Hydrocap herbicide and follow those that are most restrictive.

#### CHRISTMAS TREE PLANTATIONS

UP-End Hydrocap may be used in and around Christmas tree plantations. UP-End Hydrocap may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent UP-End Hydrocap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence control of weeds, use tank-mix combinations of UP-End Hydrocap plus VANTAGE, Roundup, Finale, or other labeled herbicides. Refer to approved labeling for species information. Determine rates for the tank-mix compounds from the product labels of both UP-End Hydrocap and partner herbicides before use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. UP-End Hydrocap plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict UP-End Hydrocap usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

UP-End Hydrocap may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. UP-End Hydrocap may be tank mixed with VANTAGE, Roundup PRO [Phoenix Avocet PLX]. Karmex \*\*, Finale \*\* felufosinate |, diuron, glyphosate or other products to provide bare ground or total vegetation control, or can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Application Rates For Weed Control In Production Ornamentals.

Table 3. APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS\*

Formatted: Font: Italic, Not Superscript/ Subscript

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic

For preemergence control of the weed species listed, apply UP-End Hydrocap at the following rates:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For extended weed control, repeat applications of UP-End Hydrocap can be made.

#### HAND-HELD SPRAY EQUIPMENT:

Use the table above to determine the amount of UP-End Hydrocap to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING-INSTRUCTIONS section of this label.

UP-End will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-End may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A UP-End treatment may be followed by any registered herbicide to control weeds not listed on the UP-End label.

The efficacy of UP End will be improved if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if UP End is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End at the abovespecified rates:

#### GRASSES CONTROLLED

Common Name	Scientific Name
Barnyardgrass	Echinochloa
	-crus-galli
Bluegrass, Annual	Poa annua
Grabgrass	Digitaria spp.
Crowfootgrass	- Daetyloetenium
	-aegyptium
Foxtail, Giant	Setaria faberi
Foxtail, Green	Setaria viridis
Foxtail, Yellow	Setaria glanea
Goosegrass	Eleusine Indica
Itehgrass	Ronboellia exaltata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from-seed)	- Eragrostis-spp-
Panieum, Browntop	Panieum fasciculatum
Panicum, Fall	- Panieum
	-dichotomiflorum
Panieum, Texas	Panieum texamum
Sandbur, Field	Cenchrus incertus
Signalgrass	- Brachiaria
	-platyphyłla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	- Leptochloa filiformis
Witchgrass	Panieum capillare

Woolly Cupgrass	Eriochioa villosa	
BROADLEAF WEEDS CO	ONTROLLED	
Common Name	Scientifie-Name	
Burweed, Lawn	Soliva pterosperma	16.81
Carpetweed	Mollugo verttellata	
Chickweed, Common	Stellaria media	
Chickweed, Mouscear	- Cerentium vulgatum	
Clover, Hop	Trifolium-procumbens	
Cudweed	- Gnaphaltum-spp.	
Eveningprimrose	Oenothera biennis	
Fiddleneck	Amsinekia intermedia	
Filoree	- Erodium spp.	
Henbit	Lamium amplexicaule	
Knotweed, prostrate	Polygonum aviculare	
Kochia	- Kochio seoparia	
Lambsquarters	- Chenopodium album	
Pigweed	Amaranthus app.	
Parotarevine	Tribulus tempestris	
Purslane	Portulaça oleracea	
Pusley, Florida	Richardia scahra	
Rocket, London	Sisymbrium irio	
Shepherdspurse	- Capsella	
and the same of th	-bursa-pastoris	
Smartweed, Pennsylvania	Polygonum	
	-pensylvanioum	
Speedwell, Com	Verantea arvensis	
Spurge, Annual	- Euphorbia spp.	
Spurge, Prostrute	- Euphorbia humistrata	
Woodserrel, Yellow	Oxalia stricta	
Velvetleaf (Buttonweed)	Abutilon theophrasti	
restaurat (commentarea)	Tromitor medphi dori	

#### Table 4. ORNAMENTAL SPECIES

UP-End Hydrocap herbicide sprays may be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to Table 3. Application Buckeye, Red Cedar White Aesculus pavia
Thuia occidentalis

Rates	For	Weed	Control	Production
Ornai	nent	als.		

#### TREES

Common Name	Scientific Name	
Alder, European Black	Almıs glutinosa	
Apple	Malus spp.	
Arborvitae, American	Thuja occidentalis	
Arbutus	Arbutus spp.	
Ash, Red	Fraxinus pennsylvanica	
Ash, White	Fraxinus americana	
Aspen, Bigtooth	Populus grandidentata	
Aspen, Quaking	Populus tremuloides	
Basswood	Tilia spp.	
Birch, European Weeping	Betula pendula	
Birch, River	Betula nigra	

Cedar, White
Chamaecyparis, Boulevard
Cherry, Black
Cherry, Choke
Cherry, Kwanzan
Cherry, Nanking
Cottonwood
Crabapple
Crepe Myrtle
Cryptomeria, Japanese Cedar
Cypress, Bald
Cypress, Leyland
Dogwood, Flowering

Dogwood, Korean

Dogwood, Silky	Cornus amomum
Dogwood, Shrub	Cornus spp.
Elm	Ulmus japonica
Elm, Winged	Ulmus alata
Eucalyptus (Silver-dollar) tree	Eucalyptus cinerea
Fir, Balsam	Abies balsamae
Fir, Douglas	Pseudotsuga menziesii
Fir, Fraser	Abies fraseri
Fir, White	Abies concolor
Franklinia	Franklinia spp.
Fringe tree	Chionenthus retusus
Ginkgo	Ginkgo biloba
Gum, Black	Nyssa sylvatica
Gum, Sour	Nyssa sylvatica
Haw, Black	Viburnum prunifolium
Hawthorn	Crataegus spp.
Hemlock, Canada	Tsuga canadensis
Hemlock, Eastern	Tsuga canadensis
Holly, American	Ilex opaca
Honeylocust	Gleditsia triacanthos
Lilac, Common	Syringa vulgaris
Lilac, Japanese Tree	Syringa reticulata
Linden	Tilia spp.
Magnolia, Saucer	Magnolia soulangiana
Magnolia, Southern	Magnolia grandiflora
Magnolia, Star	Magnolia stellata
Maidenhair Tree	Ginkgo biloba
Maple, Norway	Acer platanoides
Maple, Japanese	Acer palmatum
Maple, Red	Acer rubrum
Maple, Sugar	Acer saccharum

#### TREES (continued)

Common Name	Scientific Name
Nannyberry, Rusty	Viburnum rufidulum
Oak, Chinquapin	Quercus muehlenbergii
Oak, Live	Quercus virginiana
Oak, Pin	Quercus palustris
Oak, Red	Quercus rubra
Oak, Swamp Chestnut	Quercus michauxii
Oak, Water	Quercus nigra
Oak, White	Quercus alba
Oak, Willow	Quercus phellos
Olive	Olea europaea
Palm, Date	Phoenix spp.
Palm, Fan	Washingtonia spp.
Palm, Pindo	Butia spp.
Palm, Washington	Washingtonia spp.
Peach	Prunus persica

Pear, Bradford	Pyrus calleryana 'Bradford'
Pecan	Carya illinoensis
Pine, Austrian	Pinus nigra
Pine, Italian Stone	Pinus pinea
Pine, Loblolly	Pinus taeda
Pine, Monterey	Pinus radiata
Pine, Red	Pinus resinosa
Pine, Scotch	Pinus sylvestris
Pine, Virginia	Pinus virginiana
Pine, White	Pinus strobus
Plum, Purple Leaf	Prunus cerasifera
Poplar, Black	Populus nigra
Redcedar, Eastern	Juniperus virginiana
Redcedar, Western	Thuja plicata
Red Ironbark	Eucalyptus sideroxylon 'Rosea'
Redwood, Dawn	Metasequoia glyptostroboides
Sequoia, Giant	Sequoiadendron giganteum
Serviceberry	Amelanchier laevis
Sourwood	Oxydendrum arboreum
Spruce, Colorado Blue	Picea pungens
Spruce, Dwarf Alberta	Picea glauca 'albertiana'
Spruce, Norway	Picea abies
Spruce, White	Picea glauca
Sweetgum	Liquidambar styraciflua
Sycamore	Platanus occidentalis
Trachycarpus	Trachycarpus spp.
Tulip tree	Liriodendron tulipifera
Walnut, Black	Juglans nigra
Willow, Weeping	Salix babylonica
Yellowwood	Cladrastis lutea

Page 17

#### SHRUBS

Common Name	Scientific Name
Abelia, Glossy	Abelia grandiflora
Alder, Witch	Fothergilla gardenii
Aucuba, Gold	Aucuba japonica
Azalea	Rhododendron sp.
Bamboo, Heavenly	Nandina domestica
Barberry	Berberis gladwynensis
Barberry, Japanese	Berberis thunbergii
Blue Indigo Bush	Dalea gregii
Bottlebrush, Lemon	Callistemon citrinus
Boxwood, Common	Buxus sempervirens
Boxwood, Japanese	Buxus microphylla

Brittlebush	Encelia farinosa
Buttonbush	Cephalanthus
	occidentalis
Camellia	Camellia japonica
Cape Jasmine	Gardenia jasminoides
Cassia, Feathery	Cassia artemisioides
Cordyline	Cordyline spp.
Correa	Correa spp.
Cotoneaster	Cotoneaster
	apiculatus
Cotoneaster, Bayberry	Cotoneaster dammeri
Cotoneaster, Rock	Cotoneaster
	horizontalis
Cypress, Italian	Cupressus
	sempervirens
Cypress, Leyland	Cupressocyparis leylandii
Deutzia, Slender	Deutzia gracilis
Dogwood, Red Twig	Cornus sericea
Elaeagnus	Elaeagnus ebbingei
Escallonia	Escallonia fradesii
Euonymus	Euonymus fortunei
Euonymus, Golden	Euonymus japonica
Euonymus, Winged	Euonymus alata
Firethorn	Pyracantha coccinea
Forsythia, Border	Forsythia intermedia
Fragrant Olive	Osmanthus fragrans
Fuschia, California	Zauschineria californica
Gardenia	Gardenia jasminoides
Hawthorne, Indian	Raphiolepis indica
Hibiscus	Hibiscus syriacus
Holly, Chinese	Ilex cornuta

#### SHRUBS (continued)

SHRUBS (continued)	
Common Name	Scientific Name
Holly, Japanese	Ilex crenata
Holly, Fosters	Ilex attenuata 'Fosteri'
Holly, Savannah	Ilex attenuata
Holly, Yaupon	Ilex vomitoria
Honeysuckle, Bush	Diervilla lonicera
Hopseed Bush	Dodonaea viscosa
Hopbush	Dodonaea viscosa
Hydrangea	Hydrangea macrophylla
Juniper	Juniperus sp.
Juniper, Chinese	Juniperus chinensis v. pfitzer
Juniper, Shore	Juniperus conferta
Juniper, Trailing	Juniperus horizontalis
Laurel, Cherry	Prunus laurocerasus
Laurel, Mountain	Kalmia latifolia
Laurel, Otto Luyken	Prumus laurocerasus

#### Page 18

Laurel, Schipka	Prunus schipkanensis
Laurustinus	Viburnum timus
Lavender, English	Lavandula angustifolia
Leucothoe	Leucothoe fontanesiana
Leucothoe, Coast	Leucothoe axillaris
Lilac, Cut-leaf	Syringa laciniata
Lily-of-the-Nile	Agapanthus africanus
Mahonia	Mahonia aquifolium
Mock Orange	Pittosporum tobira
Myrtle, Compact	Myrtus communis
Myrtle, Wax	Myrica cerifera
Nandina	Nandina domestica
Oleander	Nerium oleander
Oregon Grape	Mahonia aquifolium
Osmanthus	Osmanthus fragrans
Palm, European Fan	Chamaerops humilis
Palm, Mediterranean Fan	Chamaerops spp.
Phlox, Prickly	Leptodactylon californicum
Photinia, Fraser	Photinia x Fraseri
Pieris, Japanese	Pieris japonica
Pine, Mugo	Pinus mugo
Plum, Natal	Carissa grandiflora
Privet, California	Ligustrum ovalifolium
Privet, Glossy	Ligustrum lucidum
Privet, Variegated	Ligustrum sinensis
Privet, Waxleaf	Ligustrum japonicum
Pyracantha	Pyracantha coccinea
Quince, Flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens

#### SHRUBS (continued)

Scientific Name
Ceanothus spp.
Rhododendron spp.
Pittosporum tobira
Rosa spp.
Illicium parviflorum
Spiraea vanhouttei
Spiraea X bumalda
Spiraea japonica
Laurus nobilis
Tecoma stans
Aloysia triphylla
Viburnum suspensum
Vitex spp.
Weigela florida
Ceanothus spp.

Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern*	Podocarpus macrophyllus
Yucca, Adam's Needle	Yucca filamentosa
Yucca, Weeping	Yucca pendula

<sup>\*</sup> Do not apply **UP-End Hydrocap herbicide** during spring growth or injury to terminals may occur.

#### GROUND COVERS

Common Name	Scientific Name
Ajuga	Ajuga reptans
Baby Sun Rose	Aptenia cordifolia
Beach Strawberry	Fragaria chiloensis
Capeweed	Arctotheca calendula
Cinquefoil, Spring	Potentilla verna
Coyotebrush, Dwarf	Baccharis pitularis
Daisy, Trailing African	Osteospermum fruticosum
Dymondia	Dymondia margaretae
Gazania	Gazania splendens
Iceplant, Large Leaf	Carpobrotus edulis
Ivy, English	Hedera helix
Ivy, Geranium	Pelargonium peltatum
Jasmine, Asiatic	Trachelospermum asiaticum
Jasmine, Primrose	Jasminum mesnyi
Jessamine, Carolina	Gelsemium sempervirens
Manzanita, Bearberry	Arctostaphylos uva-ursi

#### GROUND COVERS (continued)

Common Name	Scientific Name
Miscanthus	Miscanthus spp.
Mondograss	Ophiopogon japonica
Morning glory	Convolvulus spp.
Myoporum	Myoporum parviflolium
Pachysandra	Pachysandra terminalis
Potentilla	Potentilla fruticosa
Red Apple	Aptenia cordifolia
Rosemary	Rosemarinus officinalis
Rose-Of-Sharon	Hypericum calycinum
Sand Strawberry	Fragaria chiloensis
Sedum	Sedum spurium
St. Johnswort, Creeping	Hypericum calycinum

#### Page 19

Stonecrop	Sedum spurium
Verbena, Peruvian	Verbena peruviana
Vervain	Verbena peruviana
Vetch, Crown	Vicia sativa
Vinca	Vinca minor
Wintercreeper	Euonymous fortunei

#### PERENNIALS

Common Name	Scientific Name
Acacia	Acacia redolens
Asparagus	Asparagus spp.
Aster, New York	Aster novi-belgii
Aster, Stokes	Stokesia laevis
Astilibe (False Spirea)	Astilibe spp.
Avens	Geum triflorum
Baby's Breath	Gypsophila elegans
Baby's Breath	Gypsophila paniculata
Beard-Tongue	Penstemon spp.
Bellflower	Campanula spp.
Bellflower, Willow	Campanula persicifolia
Bird of Paradise	Caesalpinia pulcherrima
Black-eyed Susant	Rudbeckia hirta
Blanket Flower†	Gaillardia aristata
Blanket Flower†	Gaillardia x grandiflora
Bleeding Heart	Dicentra spectabilis
Butterfly Weed	Asclepias tuberosa
California Poppy	Eschscholzia california
Calla Lily	Zantedeschia aethiopica
Canna, Common Garden	Canna generalis 'Lucifer'

#### PERENNIALS (continued)

Common Name	Scientific Name
Carex	Carex spp.
Chincherinchee	Ornithogalum thyrsoides
Clover, Crimson†	Trifolium incarnatum
Columbine	Aquilegia 'McKana Giant'
Columbine	Aquilegia x hybrida
Coreopsis (tickseed)†	Coreopsis lanceolata
Crinum Lily	Crimum spp.
Crocus	Crocus spp.
Daffodil	Narcissus spp.
Daylily	Hemerocallis spp.
Fairy Duster	Calliandra eriophylla
Fern, Asparagus	Asparagus officinalis

Fern, Boston	Nephrolepis exaltata
Fern, Hay-scented	Dennstaedtia punctilobula
Fern, Leatherleaf*	Rumohra adiantiformis
Fortnight Lily	Moraea spp.
Foxglove	Digitalis purpurea
Freesia	Freesia x hybrida
Gaillardia	Gaillardia pulchella
Geum	Geum spp.
Gladiolus	Gladiolus spp.
Heather, Dwarf	Calluna vulgaris
Hosta	Hosta spp.
Indian Blanket†	Gaillardia pulchella
Iris, Japanese	Iris kaemphera
Lantana, Weeping	Lantana montevidensis
Leopards Bane	Doronicum cordatum
Lily	Lillium spp.
Liriope, Big Blue	Liriope muscari
Liriope, Creeping	Liriope spicata
Liriope, Variegated	Liriope muscari
Moonbeam	Coreopsis verticillata
Montbretia	Crocosmia crocosmiiflora
Mugwort, Western	Artemesia ludoviciana
Nightshade	Solamm spp.
Orchid, Peacock	Acidanthera bicolor
Oxeye Daisy†	Chrysanthemum leucanthemum
Palm, Areca	Chysalidocarpus lutescens
Palm, Pygmy Date	Phoenix roebelence
Palm, Washington	Washington robusta
Peony, Chinese	Paeonia lactiflora
Purple Coneflower†	Echinacea purpurea

#### PERENNIALS (continued)

Common Name	Scientific Name
Purple Gay-feather	Liatris pycnostachys
Purple Loosestrife	Lythrum virgatum
Rodgersia	Rodgersia henricie
Rosemary	Rosmarinus officinalis
Sedge	Carex spp.
Shasta Daisy†	Chrysanthemum x superbum
Statice	Limonium latifolia
Statice, German	Goniolimon tartaricum
Sweet Flag	Acorus calamus
Tickseed†	Coreopsis lanceolata

Page 20

Lupinus texenis
Tulipa spp.
Ornithogalum thyrsoides
Achillea millefolium
Zephyranthes spp.

- \* Applications of UP-End Hydrocap herbicide to immature ferns (during periods of new growth of fronds) may result in some injury.
- † These plants have shown tolerance to UP-End Hydrocap applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed.

#### ORNAMENTAL GRASSES

Common Name	Scientific Name
Beach Grass	Ammophila breviligulata
Fescue, Blue	Festuca glauca
Fescue, Sheep	Festuca ovina
Fountain Grass	Pennisetum setaceum
Pampas Grass	Cortaderia selloana
Reed Canary Grass	Phalaris arundinacea
Reed, Giant	Arundo spp.
Ribbon Grass	Phalaris arundinacea
Tufted Hair Grass	Deschampsia caespitosa

#### BEDDING PLANTS

Common Name	Scientific Name
Ageratum	Ageratum houstonianum
Alyssum*	Alyssum saxatile
Anemone, Poppy-flowered	Anemone coronaria
Artemesia	Artemesia spp.
Balloonflower	Platycodon grandiflorum
Begonia*	Begonia spp.
Cabbage, Ornamental	Brassica olereacea

#### BEDDING PLANTS (continued)

Common Name	Scientific Name
Caladium	Caladium spp.
Cast-Iron Plant	Aspidistra elatior
China Aster*	Callistephus chinensis
Crocosmia, Montebretia	Crocosmia x crocosmiiflora
Dahlia*	Dahlia spp.
Dianthus	Dianthus barbatus
Dusty Miller	Senecio cineraria
Gayfeather	Liatris spp.
Gazania, Treasure Flower	Gazania rigens
Gazania, Trailing	Gazania rigens leucolaena

Page 21

Gloxinia simningia
Brassica napus
Tagetes erecta
Portulaca grandiflora
Chrysanthemum spp.
Vinca major
Catharanthus roseus
Petunia spp.
Celosia cristata
Portulaca grandiflora
Salvia splendens

Snapdragon

Gloxinia simningia	Statice*	Limonium spp.
Brassica napus	Sweet William	Dianthus barbatus
agetes erecta	Vinca*	Vinca major
Portulaca grandiflora Chrysanthemum spp. Vinca major	* Do not apply UP-End Hydrocap sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.	
Catharanthus roseus		erbicide may be used on plant

de may be used on plant s label. Determine the suitability for such uses by treating a small number of such plants at the specified rate. Evaluate treated plants 1-2 months following treatment for possible

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Antirrhinum majus

PESTICIDE STORAGE: DO NOT STORE BELOW 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse after emptying, then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Containers less than or equal to 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Containers larger than 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on it end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times

#### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

Page 22

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

DRIVE, ARSENAL, SAHARA, PLATEAU and VANTAGE are registered trademarks of BASF Corporation.

AquaCap is a trademark of BASF Corporation.

Roundup and Roundup PRO are registered trademarks of Monsanto Company.

Karmex and Oust are registered trademarks of E. I. duPont de Nemours and Company.

Finale is a registered trademark of Bayer AG.

Ornamec and Trimec are registered trademarks of PBI Gordon Corp.

Three Way is a registered trademark of Lesco Technologies, LLC.

Gallery is a registered trademark of Dow AgroSciences.

Princep is a registered trademark of Syngenta.

Rev. 7/12/1012/11/12



# Pi United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax) Rebecca A. Clemmer Regulatory Manager

Dec. 11, 2012

Bo Kable Davis (PM 25)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460



Re:

UP-End Hydrocap Herbicide (EPA Reg. No. 70506-230)

Notification of Optional Additional Wording

Dear Mr. Davis:

United Phosphorus, Inc. is providing a Notification label which contains some alternate wording to be used with one of the alternate brand names for this product. The alternate wording consists of several instances where tank mix partners are referred to in slightly different ways, reflecting the different markets for the alternate brand name. In each case the alternate name is indicated here by brackets and italics; it would replace the name which directly precedes it. We have also moved the list of weeds controlled from the end of the label to a more appropriate location towards the beginning of the label.

Enclosed in support please find: one copy of the label marked to show changes and EPA form 8570-1.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

3. Title

5. Date

Regulatory Manager

December 11, 2012

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

lemmer

both under applicable law

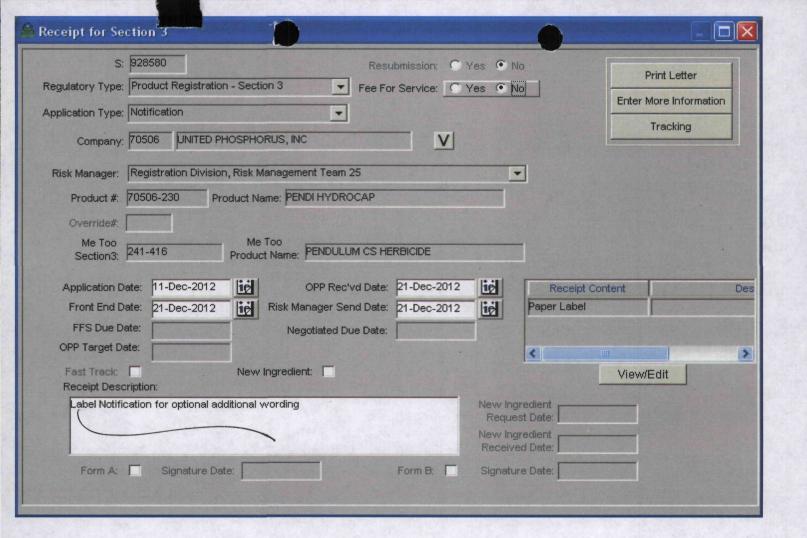
2. Signature

4. Typed Name

Rebecca A. Clemmer

White - EPA File Copy (Original) Yellow - Applicant Copy

(Stamped)





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Rebecca Clemmer United Phosphorus, Inc. 630 Freedom Business Plaza Suite 402 King of Prussia, PA 19406

NOV 1 6 2012

Subject:

Unacceptable Notification

Pendi Hydrocap

EPA Reg. No. 70506-230

Application Dated - October 15, 2012

Dear Ms. Clemmer,

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated October 15, 2012 for Pendi Hydrocap.

The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested does not clearly fall within the scope of this notice and will require additional administrative review of the related files. A summary of our findings include:

- 1. Product's Primary Brand Name is "Pendi Hydrocap"; Up-End Herbicide is listed as "Not Active".
- 2. Label changes name of ABN between Phoenix Hammerkop HydroCap, HammerkopPhoenix Hammerkop HydroCap, and Hammerkop HydroCap.

Please be advised that PRNs are provided as guidance; they are not considered regulation by the Agency. Therefore, the RD reserves the right to make the above determination and concludes that this action must be submitted by you as an amendment. No further processing of this action will occur until a resubmission is made. The RD has determined that this action is denied and our records have been updated accordingly.

If you have any questions regarding this letter, contact Maggie Rudick at (703) 347-0257 or rudick.maggie@epa.gov.

Sincerely.

Maggie Rudick, Team 25

Herbicide Branch

Registration Division (7505P)

Maggid Rit



# United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax) Rebecca A. Clemmer Regulatory Manager

October 15, 2012

Bo Kable Davis (PM 25)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

UP-End Herbicide (EPA Reg. No. 70506-230)

Notification of Alternate Brand Name

Dear Mr. Davis:

United Phosphorus, Inc. is Notifying the Agency of an additional brand name for this product:

Phoenix Hammerkop Hydrocap

Enclosed in support please find: one copy of the label marked to show changes and EPA form 8570-1.

Please contact me if you have any questions.

R.a. Clemmer Rebecca A. Clemmer rebecca.clemmer@uniphos.com RAC-2012-089





Form Approved, OMB No. 2070-0060, Approval expires 5-31-9		
	Registration	OPP Identifier Number
	Amendment	
-		

OFDA	On	teu States		A			
<b>⊕EPA</b>	Environmenta	I Protection	Agency	X Other	ament	100	
		gton, DC 2046					
	Ap	plication fo	r Pesticide - Sec				
<ol> <li>Company/Product Number 70506-230</li> </ol>			EPA Product Manager     Bo Kable Davis		3. Pro	Proposed Classification	
Company/Product (Name)     United Phosphorus, Inc/Phoenix Hammerkop Hydrocap		p	PM # 25			None	Restricted
5. Name and Address of App United Phosphorus, Inc. 630 Freedom Business Centr King of Prussia, PA 19406	er, Suite 402			Review. In accordance is similar or ide			
		9	ection - II				
Amendment - Explain t	pelow		The same of the sa	inted labels in res	ponse to		
Resubmission in response to Agency letter dated			Agency letter dated "Me Too" Application				
X Notification - Explain be		Other – Explain below					
product may be in violation of			ment action and penal	ties under section	ns 12 and 14	4 of FIFRA	Q
1. Material This Product Will							-
Child-Resistant Packaging Yes No	Unit Packaging Yes No		Yes		2. 1)	Type of Container  Metal Plastic	
_ NO			100000	No Glass			
*Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container		Paper Other (Specify)	
3. Location of Net Contents Information  Label Container		4. Size(s) Retail Container		5.	5. Location of label directions On Label On Label accompanying product		
6. Manner in Which Label is	Affixed to Product	Lithog Paper Stenc	glued	Other			
		S	ection IV				
1. Contact Person (Complete	e items directly below for	identification of	findividual to be conta				
Name Rebecca A. Clemmer	Title Regula	Title Telephone Regulatory Manager 610-491-2			No. (Include Area Code) 28		
I certify that the statements I I acknowledge that any knowl both under applicable law	nave made on this form an	ertification d all attachmen atement may be	its thereto are true, acc punishable by fine or	urate and complet		6. Date	••••
2. Signature R.a.Clem	18752 (17.070)	3. Title Regulatory Manager			: '	Stamped)	
4. Typed Name		5. Dat	5. Date				

October 15, 2012

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

Rebecca A. Clemmer

White - EPA File Copy (Original)

Yellow - Applicant Copy



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Ms. Rebecca A. Clemmer United Phosphorus, Inc. 630 Freedom Business Center Suite 402 King of Prussia, PA 19406 NOV - 5 2012

Subject: Notification per PR Notice 98-10

Pendi Hydrocap

EPA Reg. No. 70506-230

Application dated October 4, 2012

Dear Ms. Clemmer:

The Agency is in receipt of your Application for Pesticide Notification dated October 4, 2012 for the product Pendi Hydrocap. The Registration Division (RD) has conducted a review of this request for its applicability and finds that the action(s) requested does not clearly fall within the scope of notification review. A summary of our findings include:

1. The alternate brand name listed on the label ("UP-end Herbicide") is categorized as inactive in your file. An active, approved name must be listed on the label.

No further processing of this action will occur until a resubmission is made. The RD has determined that this action is denied and our records have been updated accordingly.

If you have any questions, please contact me at 703-305-5410.

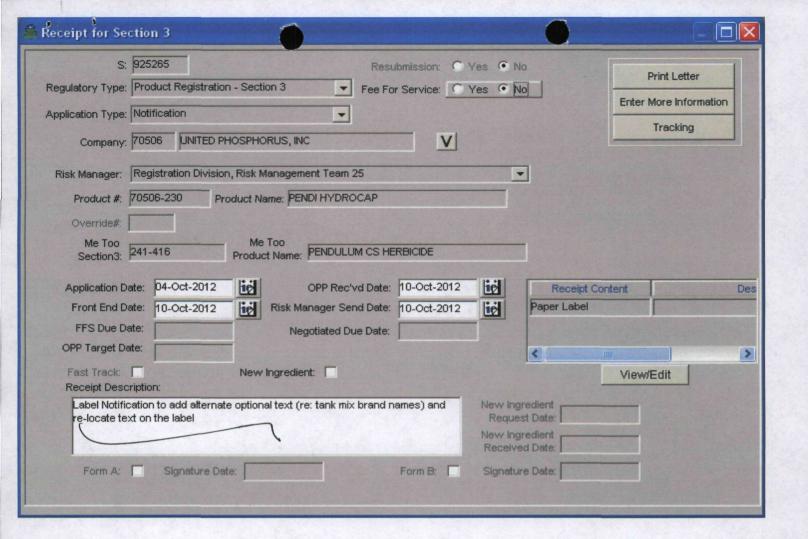
Hope Johnson

Sincerely,

PM Team 25

Herbicide Branch

Registration Division (7505P)





# United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax) Rebecca A. Clemmer Regulatory Manager

October 4, 2012

Bo Kable Davis (PM 25)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

CHATRA VILLE

Re:

UP-End Herbicide (EPA Reg. No. 70506-230) Notification of Optional Additional Wording

Dear Mr. Davis:

United Phosphorus, Inc. is providing a Notification label which contains some alternate wording to be used with one of the alternate brand names for this product. The alternate wording consists of several instances where tank mix partners are referred to in slightly different ways, reflecting the different markets for the alternate brand name. In each case the alternate name is indicated here by brackets and italics; it would replace the name which directly precedes it. We have also moved the list of weeds controlled from the end of the label to a more appropriate location towards the beginning of the label.

Enclosed in support please find: one copy of the label marked to show changes and EPA form 8570-1.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

Certification

Regulatory Manager

5. Date October 4, 2012

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

emmer

both under applicable law

2. Signature

4. Typed Name

Rebecca A. Clemmer

White - EPA File Copy (Original) Yellow - Applicant Cop

6. Date Application

Received

GROUP 3 HERBICIDE

# **UP-End Herbicide**

For Preemergent Weed Control in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT	
pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2, 6-dinitrobenzenamine	38.7%
OTHER INGREDIENTS:	61.3%
TOTAL	100.0%

(1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous carrier.)

#### KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

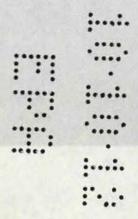
	FIRST AID
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.     Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.     Call a poison control center or doctor for treatment advice.
	container or label with you when calling a poison control center or doctor or going for treatment

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



United Phosphorus, Inc 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 1-800-247-1557 EPA Reg. No. 70506-230 EPA Est. No.

Net Contents



# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### Personal Protective Equipment (PPE):

Some materials that are chemically resistant to these products are listed below. For more options, refer to Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate.
- · Shoes plus socks

Follow manufacturer's instruction for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

Users should:

- . Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as
  possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

# DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

Do not apply this product through any type of irrigation system.

UPI does not authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation. Do not apply **UP-END herbicide** in greenhouses, shadehouses or other enclosed structures.

Not for use for commercial seed production.



#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- · Coveralls
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

# MODE OF ACTION

UP-End is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

# PRODUCT INFORMATION

[Note to reviewer: words in italics and brackets are optional alternate competitor product names to be used with one of the UPI alternate brand names].

APPLICATION USE SITES - for preemergence control of grasses and certain broadleaf weed species as they germinate.

Turfgrass sites (golf course, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas, such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.

Bulb plantings, non-bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants.

Formatted: Font: 12 pt, Italic

Formatted: Font: 12 pt, Italic

Formatted: Font: 12 pt, Italic



In and around field, liner and container ornamental production.

#### APPLICATION INSTRUCTIONS

UP-End will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use UP-End together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of UP-End will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-End is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, UP-End or UP-End tank-mix combinations will not cause crop injury. Over-application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-End.

#### MIXING INSTRUCTIONS

UP-End may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to UP-End alone.

When using tank mixtures or sequential applications with UP-End, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

#### **Mixing Instructions**

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing UP-End or UP-End tank
mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer,
application instructions, and compatibility determinations.

#### 2. UP-End

When using UP-End alone, add UP-End to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

#### 3. UP-End Tank Mixes

Add the tank mixture ingredients in the order listed below before adding UP-End:

- (a) Wettable Powder (WP) formulations make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations add the F formulation to the partially filled tank while agitating.
- (d) Add UP-End to the partially filled tank while agitating.
- (e) Water Soluble Concentrate (WSC) formulations add the WSC formulation to the partially filled tank while agitating.
- (f) Emulsifiable Concentrate (EC) formulations add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating

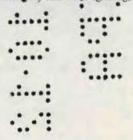
4. Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

#### 5. BACKPACK SPRAYER

Begin with a clean spray tank. Fill the spray tank one-half full with clean water and add the required amount of UP-End. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

#### 6. LIQUID FERTILIZERS

Before mixing, always est small quantities using a simple jar test. Add the required amount of UP-End to a half filled spray tank while agitating, then add the fertilizer product. Complete filling spray tank to desired level.



# SPRAYING INSTRUCTIONS GROUND APPLICATIONS

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area, using a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turfgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those listed. Do not apply when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. If contact occurs, rinse immediately with water to avoid staining. Do not mechanically scrub until the surface area is thoroughly rinsed. Allow treated turfgrass to dry before entering to avoid staining onto non-treated surfaces.

#### AERIAL APPLICATIONS

Apply uniformly in 5 or more gallons of water per acre. Take care to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. To avoid overlapping and possible crop injury, use a flagman or an automatic mechanical flagging unit on the aircraft.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipmentand weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Observe more stringent state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows
  produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower
  pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of
  increasing pressure.
- · Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower
  spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back
  produce the largest droplets and the lowest drift.

### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.



#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

# TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog, however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

# WEED SPECIES CONTROLLED

UP-End will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-End may be used together with herbicides registered for postemergence use (i.e. Roundup [glyphosate] or Finale [glufosinate]) for the control of established weeds. Do not apply sprays containing Roundup [glyphosate] or Finale [glufosinate] over the top of desirable plants. A UP-End treatment may be followed by any registered herbicide to control weeds not listed on the UP-End label.

The efficacy of UP-End will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if UP-End is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End at the abovespecified rates:

#### GRASSES CONTROLLED

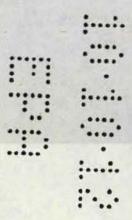
Scientific Name
Echinochloa
crus-galli
Poa annua
Digitaria spp.
Dactyloctenium
accyptium
Setaria faberi
Setaria viridis
••
;

Foxtail, Yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaltata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, Browntop	Panicum fasciculatum
Panicum, Fall	Panicum
	dichotomiflorum
Particum, Texas	Panicum texanum
Sandbur, Field	Cenchrus incertus

Brachlaria platyphylla Leptochloa uninervia Sprangleton, Mexican Leptochloa filiformis Sprangletop, Red Witchgrass Panicum capillare Eriochloa villosa Woolly Cupgriss BROADLEAF WEEDS CONTROLLED Common Name Scientific Name Burweed, Lawn Soliva pterosperma Carpetweed Mollugo verticillata Chickweed, Common Stellaria media Chickweed Mouseear Cerastium vulgatum Clover, Hop Trifolium procumbens Gnaphalium spp. Cudweed Eveningprimrose Oenothera biennis Fiddleneck Amsinckia intermedia Erodium spp. Filarce Henbit Lamium amplexicaule Knotweed, prostrate Polygonum aviculare Kochia Kochia scoparia Lambsquarters Chenopodium album Amaranthus spp. Pigweed Puncturevine Tribulus terrestris Purslane Portulaça oleracea Pusley, Florida Richardia scabra Rocket London Sisymbrium irio Shepherdspurse Copsella bursa-pastoris Smartweed Pennsylvania Polygoman Pensylvanicum
Veronica arvensis
Euphorbia spp. Speedwell, Corn. Spurge, Annual Spurge, Prostrate Woodsorrel, Yellow Oxalis stricta

Abutilon theophrasti

Velvetleaf (Buttonweed)



# Table 1. RESIDENTIAL RESIDENTIAL GOLF COURSE COURSE. COMMERCIAL AND OTHER NON-RESIDENTIAL TURFGRASS USES

Application Rates For Preemergence Weed Control

Turfgrass Species	Weeds	UP-END herbici	pints	Comments	
	Weeks.	Product per 1,000 sq.ft.	Product per acre	Comments	
COOL SEASON G	RASSES				
Bluegrass, Kentucky	Barnyardgrass	All Turf Uses:		Make a repeat application of 2.2 to 3.1	
Fescue, Fine Fescue, Tall Ryegrass, Perennial	Crabgrass	1.1 to 1.6 fl oz 3.1 to 4.2 pints			
	Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Oxalis Poa annua Prostrate Spurge Purslane	Initial application be spring.	fore weed germination in	pints/A (0.86 to 1.1 oz/1000 sq. ft.) after 5- weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass	Residential and Sod Farm		Make a repeat	
		Turf Uses Only <sup>2</sup> :		application of 3.1	
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	pints/Acre (1.1 oz/1000	
		Residentia	mercial and Other Non- Turf Uses Only:	sq. ft.) if the lower rate was used initially or for	
		1.1 to 2.3 oz	3.1 to 6.3 pints	extended goosegrass	
		spring.	fore weed germination in	control after 5-8 weeks	
	Chickweed		Turf Uses:	Apply in late summer or	
	Corn Speedwell Cudweed Henbit Lawn Burweed Poa annual	1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Apply a repeat application of 3, to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) after 5- weeks for extended Post annua control.	
Bentgrass or	Barnyardgrass	(Non-Greens and Tees): application in spring. application before weed germination in spring. application before weed germination in spring.		Make a repeat application of 2.2 to 3.1	
established Poa	Crabgrass				
annua (1/2 inch	Evening Primrose			pints/Acre (0.86 to 1.1	
height or taller) Fall Panicum Foxtail Hop Clover Knotweed Poa annua Oxalis Prostrate Spurge	Foxtail Hop Clover Knotweed Poa annua Oxalis			oz/1000 sq. fl.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass	All Turf Uses		Apply a repeat application of 3.1 pts/Acre (1.1 oz/1000 sq ft.) for extended	
		(Non-Greens and Tees):			
	E. H.	1.1 fl oz 3.1 pints Initial application before weed germination in			
	L. Maries	spring.		goosegrass control after 5-8 weeks.	
	Chickweed Corn Speedwell		Turf Uses eens and Tees):	Apply in late summer or	
;	Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3.1 to 4.2 pmts	early fall before weed germination.	

	-	UP-END herbici	Contract of the Contract of th	
Turfgrass Species Weeds	Weeds	fl. oz.	pints	Comments
		Product per 1,000 sq.ft.		
WARM SEASON GI	RASSES			
	Barnyardgrass Crabgrass	Residential and Sod Farm Turf Uses Only:		Make a repeat application of 2.2 to 3.1
Buffalograss	Evening Primrose	1.1 to 1.6fl oz	3.1 to 4.2 pints	pints/Acre (0,86 to 1.1
Centipedegrass Fall Panicum Fescue, Tall Foxtail	Golf Course, Commercial and Other Non- Residential Turf Uses Only:		oz/1000 sq. ft.) after 5-8 weeks if necessary.	
Paspalum,	Hop Clover	1.1 to 2.3 fl oz	3.1 to 6.3 pints	
seashore St. Augustinegrass Zoysiagrass	Augustinegrass Poa annua	Initial application before weed germination in spring.		
	Goosegrass	All Turf Uses (Non-Greens and Tees):		An additional application of 3.1 pt/Acre (1.1
		1.1 fl oz	3.1 pints	oz/1000 sq. ft.) may be
		Apply before weed germination in spring.		made for extended goosegrass control 8 weeks after the second application.
		Make a second application at 3.1 pints (1.1 oz/1000 sq.ft.) 5-8 weeks later.		
	Chickweed	All Turf Uses:		Apply in late summer or
	Corn Speedwell Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Make a repeat application of 3 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) 5-8 weeks for extended Po annua control.

Do not use more than 4.2 pints (2.1 quarts) <u>per acre per application</u> on residential and sod farm turfgrass. Do not use more than 6.3 pints (3.1 quarts) <u>per acre per application</u> on golf course turfgrass, commercial or other non-residential turfgrass.

The efficacy of UP-End is best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-End is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is undesirable, <u>Do not rub or scrub surface</u>, but rinse area immediately using a heavy spray of water to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non-treated surfaces.

### TURFGRASS TANK MIXES

UP-End can be mixed with postemergence herbicides to control emerged weeds in non-residential turfgrasses. For annual grass control, applications can be made with DRIVE® [Phoenix Rook®] or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2-4,D *[Phoenix TernStyle]* and other similar products. Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End and follow those that are most restrictive.

#### TURFGRASS RESTRICTIONS

 Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application. Formatted: Font: Italic
Formatted: Font: Italic
Formatted: Font: Italic

Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.

<sup>&</sup>lt;sup>3</sup> Not for use on bentgrass or *Poa annua* greens or tees.

- On newly planted areas, do not apply until the turfgrass has filled in and has been moved at least four times.
   Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.
- . Do not use on bentgrass or Poa annua greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for a least three (3) months following the last UP-END herbicide application.
- · Delay sprigging turfgrass for five (5) months after application.

# LANDSCAPE AND GROUNDS MAINTENANCE

UP-End can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix UP-End with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While UP-End may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad-use application is made.

Refer to Table 2. Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

# ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use UP-End for grounds maintenance in noncropland areas, preemergence control of the weed species listed in and around established tree plantations for site preparation, and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. UP-End may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land UP-End can also be used in Christmas trees and non-bearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to Table 2. Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent UP-End from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on Instructions and Restrictions in Landscape and Ornamental Plantings before making an application.

For postemergence control of weeds, use tank-mix combinations of UP-End plus VANTAGE\*, Roundup\*, Finale\*, Letwosinate1, or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both UP-End and partner herbicides before use. Take care to prevent combination sprays from direct contact with desirable foliage or injury may result. UP-End plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict UP-End usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

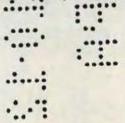
#### ORNAMENTAL BULBS

UP-End may be applied for control of susceptible annual weeds in omamental bulbs listed under the Perennial Section on the label (crocus, daffodil [narcissus], gladiolus, lilies, tulip, etc.). Apply UP-End before, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

#### WILDFLOWERS

UP-End may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (\*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of UP-End at 4.2 pints (2.1 quarts) per acre. UP-End may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply UP-End no sooner than 4 weeks after wildflowers have emerged but before weed garanteetion. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label certaintions before making an application.

Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to UP-End may vary greatly. Test desirable species carefully to determine if area-wide applications can be made.



Formatted: Font: Italic

Page 11

# NON-BEARING FRUIT AND NUTCROPS AND VINEYARDS

UP-End may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Citrus Olive Pistachio
Apple Fig Peach Plum
Apricot Grape Pear Prune
Cherry Nectarine Pecan Walnut, English

#### NON-CROPLAND WEED CONTROL

Use UP-End herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

#### INDUSTRIAL (UNIMPROVED) TURF

UP-End will provide preemergence control of the annual grasses and broadleaf weeds listed in Weed Species Controlled section of this label that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D [Phoentx TernStyle], DRIVE\* [Phoentx Rook], VANTAGE\*, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

#### TOTAL VEGETATION CONTROL

UP-End may be tank mixed with ARSENAL\*, SAHARA\*, PLATEAU\*, VANTAGE\*, Roundup\* PRO, Karmex\*, Finale\* \* \*fglufosinate\*\*, Oust\*, diuron, glyphosate \*IPhoenix Avocet PLN\*\* or other products to provide bare ground, or total vegetation control. UP-End can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with ARSENAL, SAHARA or PLATEAU herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For Kochia control, use a combination of UP-End with ARSENAL herbicide or diuron if control has been a problem for other herbicides.

# TABLE 2. APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS, AND OTHER NONCROP AREAS\*

For preemergence control of the weed species listed, apply UP-End as follows:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1,6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 1 instructions.

For extended weed control, repeat applications of UP-End can be made.

# INSTRUCTIONS AND RESTRICTIONS

## LANDSCAPE AND ORNAMENTAL PLANTINGS<sup>1</sup>

Site	Application Instructions and Restrictions	
Landscape Plantings <sup>2</sup>	Do not apply to newly-transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.	
	2. Apply as a directed or over-the-top spray.	
	<ol> <li>Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.</li> </ol>	
Ornamental Bulbs <sup>3</sup>	UP-End may be applied to bulb species listed on the label.	

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/

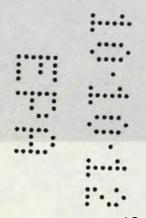
Subscript

Formatted: Font: Italic, Not Superscript/

Subscript

Formatted: Font: Italic

Formatted: Font: Italic



	Apply before, during or after bulb emergence, but not during bloom.
Wildflowers <sup>3</sup>	<ol> <li>UP-End may be applied in plantings of wildflowers listed on the label. Refer to specific instructions for rate and plant tolerance.</li> </ol>
	For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-End or injury may occur.

## HAND-HELD SPRAY EQUIPMENT:

Use table 2 above to determine the amount of UP-End to be applied per 1000 square feet, in sufficient water for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-End will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any necessary cultivation must be shallow. UP-End may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants. A UP-End treatment may be followed by any registered herbicide to control weeds not listed on the UP-End label.

The efficacy of UP-End will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if UP-End is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End herbicide at the above-specified rates:

# GRASSES CONTROLLED

Echinochloa crus- galli Poa annua Digitaria spp. Dactyloctenium aegyptium Setaria faberi Setaria viridis Setaria glauca Eleusine indica
Digitaria spp. Dactyloctenium aegyptium Setaria faberi Setaria viridis Setaria glauca
Dactyloctenium aegyptium Setaria faberi Setaria viridis Setaria glauca
aegyptium Setaria faberi Setaria viridis Setaria glauca
aegyptium Setaria faberi Setaria viridis Setaria glauca
Setaria viridis Setaria glauca
Setaria glauca
CALLY STAN FOR YARDON STAN STAN
Eleusine indica
Rottboellia exaltata
Sorghum halepense
Echinochloa colona
Eragrostis spp.
Panicum fasciculatum
Panicum
dichotomiflorum
Panicum texanum
Cenchrus incertus
Brachiaria
platyphylla
Leptochloa uninervia
Leptochloa filiformis
Punicum capillare
Priochloa villosa
••
••
••

### BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name
Burweed, Lawn	Soliva pterosperma
Carpetweed	Mollugo verticillata
Chickweed, Common	Stellaria media
Chickweed, Mouseear	Cerastium vulgatum
Clover, Hop	Trifolium procumbens
Cudweed	Gnaphalium spp.
Evening primrose	Oenothera biennis
Fiddleneck	Amsinckia intermedia
Filaree	Erodium spp.
Henbit	Lamium amplexicaule
Knotweed, prostrate	Polygonum aviculare
Kochia	Kochia scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus spp.
Puncturevine	Tribulus terrestris
Purslane	Portulaca oleracea
Pusley, Florida	Richardia scabra
Rocket, London	Sisymbrium irio
Shepherdspurse	Capsella bursa-
	pastoris
Smartweed, Pennsylvania	Polygonum
	pensylvanicum
Speedwell, Corn	Veronica arvensis
Spurge, Annual	Euphorbia spp.

<sup>&</sup>lt;sup>2</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

<sup>&</sup>lt;sup>3</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

Page 13

Spurge, Prostrate Woodsorrel, Yellow Euphorbia humistrata Oxalis stricta Velvetleaf (Buttonweed)

Abutilon theophrasti

#### COMMERCIAL ORNAMENTAL PRODUCTION

#### GENERAL INFORMATION

Application Use Sites: UP-End can be used in and around field, liner and container ornamental production.

UP-End sprays may be used around and over the top of the established plants listed in Table 4 of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of UP-End. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

## APPLICATION INSTRUCTIONS

UP-End will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment, or UP-End may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

The efficacy of UP-End will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-End is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, UP-End or UP-End tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-End.

#### SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of

# INSTRUCTIONS AND RESTRICTIONS1 IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses, shadehouses or other enclosed structures.

Site	Application Instructions and Restrictions
Newly-Transplanted Field-Grown	Do not make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.
Nursery Stock <sup>2, 3</sup>	Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where UP-End herbicide could come into contact with the roots.
	3. DO NOT apply during bud swell, bud break or at time of first flush of new growth.
	Direct sprays away from graphed or budded tissue on transplants at all times.
Newly-Transplanted Container-Grown Nursery Stock <sup>2,3</sup>	Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Care must be taken to ensure there are no cracks in the soil where UP-End could come into contact with the roots.
	For container grown ornamentals, delay first application of the product to bareroot liners for two     (2) weeks after transplanting.
	3. Do not apply during bud swell, bud break or at time of first flush of new growth.
	4. Direct sprays away from graphed or budded tissue on transplants at all times.



Established Container, or Field- Grown Nursery Stock <sup>2,3</sup>	Do not apply during bud swell, bud break or at time of first flush of new growth.     Apply as a directed or over-the-top spray.     If newly budded or graphed rootstock, make an application using a shielded sprayer.     Take care to ensure there are no cracks in the soil where UP-End could come into contact with the roots.
Bare Ground for	<ol> <li>Apply to soil then water in (including mulch, gravel, wood chips, or other permeable base),</li></ol>
Container Placement	replace containerized ornamentals onto pad.

<sup>&</sup>lt;sup>1</sup> Plant only those desirable plant species listed on this label into soil treated the previous season with UP-End or injury may occur.

Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE\*, Roundup® [Phoenix Avacet PLX], Finale [Informate], Ornamee\*, Gallery\*, Princep\*, and other similar products. Do not apply sprays containing Roundup [Informate] or Finale [Informate] over the top of ornamental plants.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End herbicide and follow those that are most restrictive.

#### CHRISTMAS TREE PLANTATIONS

UP-End may be used in and around Christmas tree plantations. UP-End may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent UP-End from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence control of weeds, use tank-mix combinations of UP-End plus VANTAGE, Roundup, Finale, or other labeled herbicides. Refer to approved labeling for species information. Determine rates for the tank-mix compounds from the product labels of both UP-End and partner herbicides before use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. UP-End plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict UP-End usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

# VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

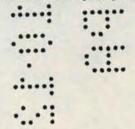
UP-End may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. UP-End may be tank mixed with VANTAGE, Roundup PRO [Phoenix Avocet P]X]. Karmex Finale \*\* felufosinate], diuron, glyphosate or other products to provide bare ground or total vegetation control, or can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Application Rates For Weed Control In Production Ornamentals.

Table 3. APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS\*

For preemergence control of the weed species listed, apply UP-End at the following rates:

	Length of Control	Product per Acre	Product per 1000 sq. ft.
	Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
•:•	Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

\*For extended weed control, repeat applications of UP-End can be made.



Formatted: Font: Italic, Not Superscript/ Subscript

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/ Subscript

Formatted: Font: Italic

Formatted: Font: Italic Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic, Not Superscript/ Subscript

Formatted: Font: Italic

<sup>&</sup>lt;sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

<sup>&</sup>lt;sup>3</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

#### HAND-HELD SPRAY EQUIPMENT:

Use the table above to determine the amount of UP-End to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-End will not central established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-End may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the central of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A UP-End treatment may be followed by any registered herbicide to control weeds not listed on the UP-End-label.

The efficacy of UP End will be improved if the application is followed by one half inch of rainfall or its equivalent in sprinkler irrigation. Fruitie weed control may result if UP End is not activated by rainfall or irrigation within 30 days.

The following grass and broudleaf-weeds are controlled by preemergence treatments of UP-End-at-the abovespecified rates:

## GRASSES CONTROLLED

Common Name	Scientific Name	
Barnyardgrass-	- Echinochloa	
All Services	-crus-galli	
Bluegrass, Annual	Poa annua	
Grabgrass	Digitaria spp.	
Crowfootgrass	- Daetyloetenium	
	-aegyptium	
Foxtnil, Giant	Setaria faberi	
Fostail, Green	Soturia viridis	
Foxtail, Yellow	- Setario glavea	
Goesegrass	- Elousino indica	
Itehgrass	Rouboellia exaltata	
Johnsongrass (from-seed)	Sarghum halepensa	
Junglerice	- Echinochlea colona	
Lovegrass (from-seed)	Eragrostis spp.	
Panicum, Browntop	Panieum faseiculatum	
Panicum, Fall	— Panicum	
	-dichotomiflorum	
Panieum, Texas	Panieum-texamm	
Sandbur, Field	- Cenchrus incertus	
Signalgrass	- Brachiaria	
a de la composição de l	-platyphylla	
Sprangletop, Mexican	Leptochloa uninervia	
Sprangletop, Red	Leptochioa filiformis	
Witchgrass	Panicum-copillare	
Weelly Cupgrass	- Eriochloa villesa	

#### BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name	
Burweed, Lown	Soliva ptaraoperma	
Carpetweed-	Mollugo verticillata	
Chickweed, Common	Stellaria media	
Chickweed, Mouseens	Cerastium-vulgatum	
Clover, Hop	Trifolium procumbens	



Page 16

Cudweed	Gnaphalium spp.
Eveningprimrose	- Ocnothera biennis
Fiddleneck	Amstrekia intermedia
Filoree	Erodium-spp:
Henbit	Lamium amplexicaule
Knotweed, prostrate	Polygonum aviculare
Kochia	- Kochia scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus-spp.
Puneturevine	Tribulua terrestris
Purslane	Portulaca oleracea
Pusley, Florida	-Richardia-seabra
Rocket, London	Sisymbrium-trio
Shepherdspurse	- Capsella
the state of	-huraa-pastoris
Smartweed, Pennsylvania	Polygonum
	-pensylvanieum
Speedwell, Com	Veronica arvensis
Spurge, Annual	Euphorbia spp.
Spurge, Prestrate	- Euphorbia lumistrata
Woodsorrel, Yellow	- Oxalis stricta
Velvetleaf (Buttonweed)	Abutilon-theophrasti

# Table 4. ORNAMENTAL SPECIES

UP-End herbicide sprays may be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to Table 3. Application Rates For Weed Control Production

Crabapple

Malus spp.

Rates For Weed Control Production Ornamentals.

# TREES

Common Name	Scientific Name
Alder, European Black	Almus glutinosa
Apple	Malus spp.
Arborvitae, American	Thuja occidentalis
Arbutus	Arbutus spp.
Ash, Red	Fraxinus pennsylvanica
Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus grandidentata
Aspen, Quaking	Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra
Buckeye, Red	Aesculus pavia
Cedar, White	Thuja occidentalis
Chamaecyparis, Boulevard	Chamaecyparis pisifera
Cherry Black	Prumus serotina
Cherry, Choke	Prunus virginiana
Cherry, Kwanzan	Prunus serrulata
Cherry, Narking	Prunus tomentosa
Cottonwood	Populus deltoides
••••	
	:

Crapappie	Maries spp.
Crepe Myrtle	Lagerstroemia indica
Cryptomeria, Japanese Cedar	Cryptomeria japonica
Cypress, Bald	Taxodium distichum
Cypress, Leyland	Cupressocyparis leylandii
Dogwood, Flowering	Cornus florida
Dogwood, Korean	Cornus kousa
Dogwood, Silky	Cornus amomum
Dogwood, Shrub	Cornus spp.
Elm	Ulmus japonica
Elm, Winged	Ulmus alata
Eucalyptus (Silver-dollar) tree	Eucalyptus cinerea
Fir, Balsam	Abies balsamae
Fir, Douglas	Pseudotsuga menziesii
Fir, Fraser	Abies fraseri
Fir, White	Abies concolor
Franklinia	Franklinia spp.
Fringe tree	Chlonenthus retusus
Ginkgo	Ginkgo biloba
Gura, Black	Nyssa sylvatica
Gum, Sour	Nyssa sylvatica
Haw, Black	Viburnum prunifolium
Hawthorn	Crataegus spp.
Hemlock, Canada	Tsuga canadensis

Hemlock, Eastern Holly, American Honeylocust Lilac, Common Lilac, Japanese Tree Linden Magnolia, Saucer

Magnolia, Southern Magnolia, Star Maidenhair Tree Maple, Norway Maple, Japanese Maple, Red

Maple, Sugar

# TREES (continued)

Common Name Nannyberry, Rusty Oak, Chinquapin

Oak, Live Oak, Pin Oak, Red Oak, Swamp Chestnut Oak, Water Oak, White Oak, Willow Olive Palm, Date Palm, Fan Palm, Pindo Palm, Washington Peach Pear, Bradford

Pecan Pine, Austrian Pine, Italian Stone Pine, Loblolly Pine, Monterey Pine, Red Pine, Scotch Pine, Virginia Pine, White Plum, Purple Leaf Poplar, Black Redcedar, Eastern Redcedar, Western Red Ironbark

Tsuga canadensis llex opaca Gleditsia triacanthos Syringa vulgaris Syringa reticulata Tilia spp. Magnolia soulangiana Magnolia stellata Ginkgo biloba Acer platanoides Acer palmatum Acer rubrum

Magnolia grandiflora

Acer saccharum

Scientific Name Viburnum rufidulum Quercus muehlenbergii Quercus virginiana Quercus palustris Quercus rubra Quercus michauxii Ouercus nigra Ouercus alba Quercus phellos Olea europaea Phoenix spp. Washingtonia spp. Butia spp. Washingtonia spp. Prunus persica Pyrus calleryana 'Bradford'

Carya illinoensis Pinus nigra Pinus pinea Pinus taeda Pinus radiata Pinus resinosa Pinus sylvestris Pinus virginiana

Pinus strobus Prunus cerasifera Populus nigra Juniperus virginiana Thuja plicata

Eucalyptus sideroxylon 'Rosea' Redwood, Dawn

Sequoia, Giant

Serviceberry Sourwood

Spruce, Colorado Blue Spruce, Dwarf Alberta

Spruce, Norway Spruce, White Sweetgum

Sycamore Trachycarpus Tulip tree

Walnut, Black Willow, Weeping Yellowwood

SHRUBS

Common Name Abelia, Glossy Alder, Witch Aucuba, Gold Azalea Bamboo, Heavenly Barberry

Barberry, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Brittlebush Buttonbush

Camellia Cape Jasmine Cassia, Feathery Cordyline Correa Cotoneaster

Cotoneaster, Bayberry Cotoneaster, Rock

Cypress, Italian

Cypress, Leyland

Scientific Name

Page 17

glyptostroboides

Amelanchier laevis

Sequoiadendron

Metasequoia

giganteum

Oxydendrum

arboreum

Picea pungens

Picea glauca

'albertiana'

Picea abies

Picea glauca

Liquidambar

styraciflua

Liriodendron tulipifera

Juglans nigra

Salix babylonica

Cladrastis lutea

Platanus occidentalis

Trachycarpus spp.

Abelia grandiflora Fothergilla gardenii Aucuba japonica Rhododendron sp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii

Callistemon citrinus Buxus sempervirens Buxus microphylla Encelia farinosa Cephalanthus occidentalis Camellia japonica Gardenia jasminoides Cassia artemisioides

Cordyline spp. Correa spp. Cotoneaster apiculatus Cotoneaster dammeri Cotoneaster horizontalis

Cupressus sempervirens Cupressocyparis leylandii

Deutzia, Slender
Dogwood, Red Twig
Elaeagnus
Escallonia
Euonymus
Euonymus, Golden
Euonymus, Winged
Firethorn
Forsythia, Border
Fragrant Olive
Fuschia, California
Gardenia

Deutzia, Slender
Elaeagnus
Elaeagn

Deutzia gracilis Cornus sericea Elaeagnus ebbingei Escallonia fradesii Euonymus fortunei Euonymus japonica Euonymus alata Pyracantha coccinea Forsythia intermedia Osmanthus fragrans Zauschineria californica Gardenia jasminoides Raphiolepis indica Hibiscus syriacus llex cornuta

# SHRUBS (continued)

Hawthorne, Indian

Holly, Chinese

Hibiscus

SHRUBS (continued	)
Common Name	Scientific Name
Holly, Japanese	Ilex crenata
Holly, Fosters	Ilex attenuata 'Fosteri
Holly, Savannah	Ilex attenuata
Holly, Yaupon	Ilex vomitoria
Honeysuckle, Bush	Diervilla Ionicera
Hopseed Bush	Dodonaea viscosa
Hopbush	Dodonaea viscosa
Hydrangea	Hydrangea macrophylla
Juniper	Juniperus sp.
Juniper, Chinese	Juniperus chinensis v. pfitzer
Juniper, Shore	Juniperus conferta
Juniper, Trailing	Juniperus horizontali:
Laurel, Cherry	Prumus laurocerasus
Laurel, Mountain	Kalmia latifolia
Laurel, Otto Luyken	Prunus laurocerasus
Laurel, Schipka	Prunus schipkanensis
Laurustinus	Viburnan timus
Lavender, English	Lavandula angustifolia
Leucothoe	Leucothoe fontanesiana
Leucothoe, Coast	Leucothoe axillaris
Lilac, Cut-leaf	Syringa laciniata
Lily-of-the-Nile	Agapanthus africanus
Mahonia	Mahonia aquifolium
Mock Orange	Pittosporum tobira
Myrtle, Compact	Myrtus communis
Myrtle, Wax	Myrica cerifera
Nandina	Nandina domestica
Oleander	• • • • Nerium oleander
Oregon Grape	Mahonia aquifolium

# Page 18

Osmanthus	Osmanthus fragrans
Palm, European Fan	Chamaerops humilis
Palm, Mediterranean Fan	Chamaerops spp.
Phlox, Prickly	Leptodactylon californicum
Photinia, Fraser	Photinia x Fraseri
Pieris, Japanese	Pieris japonica
Pine, Mugo	Pinus mugo
Plum, Natal	Carissa grandiflora
Privet, California	Ligustrum ovalifolium
Privet, Glossy	Ligustrum lucidum
Privet, Variegated	Ligustrum sinensis
Privet, Waxleaf	Ligustrum japonicum
Pyracantha	Pyracantha coccinea
Quince, Flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens

# SHRUBS (continued)

Common Name	Scientific Name
Redroot	Ceanothus spp.
Rhododendron	Rhododendron spp.
Robira	Pittosporum tobira
Rose	Rosa spp.
Spice Plant	Illicium parviflorum
Spiraea	Spiraea vanhouttei
Spiraea, Anthony Waterer	Spiraea X bumalda
Spiraea, Japanese	Spiraea japonica
Sweet Bay	Laurus nobilis
Trumpet Bush	Tecoma stans
Verbena, Lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild Lilac	Ceanothus spp.
Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern*	Podocarpus macrophyllus
Yucca, Adam's Needle	Yucca filamentosa
Yucca, Weeping	Yucca pendula

 Do not apply UP-End herbicide during spring growth or injury to terminals may occur.

# GROUND COVERS

Scientific Name
Ajuga reptans
Aptenia cordifolia

Beach Strawberry Fragaria chiloensis Capeweed Arctotheca calendula Cinquefoil, Spring Potentilla verna Coyotebrush, Dwarf Baccharis pitularis Daisy, Trailing African Osteospermum fruticosum Dymondia Dymondia margaretae Gazania Gazania splendens Iceplant, Large Leaf Carpobrotus edulis Ivy, English Hedera helix Ivy, Geranium Pelargonium peltatum Jasmine, Asiatic Trachelospermum asiaticum Jasmine, Primrose Jasminum mesnyi Jessamine, Carolina Gelsemium sempervirens Manzanita, Bearberry Arctostaphylos uva-ursi

GROUND COVERS (continued)

Common Name	Scientific Name
Miscanthus	Miscanthus spp.
Mondograss	Ophiopogon japonica
Morning glory	Convolvulus spp.
Myoporum	Myoporum parviflolium
Pachysandra	Pachysandra terminalis
Potentilla	Potentilla fruticosa
Red Apple	Aptenia cordifolia
Rosemary	Rosemarinus officinalis
Rose-Of-Sharon	Hypericum calycinum
Sand Strawberry	Fragaria chiloensis
Sedum	Sedum spurium
St. Johnswort, Creeping	Hypericum calycinum
Stonecrop	Sedum spurium
Verbena, Peruvian	Verbena peruviana
Vervain	Verbena peruviana
Vetch, Crown	Vicia sativa
Vinca	Vinca minor
Wintercreeper	Euonymous fortunei

# PERENNIALS

Common Name	Scientific Name
Acacia	Acacia redolens
Asparagus	Asparagus spp.
Aster, New York	Aster novi-belgii
Aster, Stokes	Stokesia laevis
Astilibe (False Spirea)	Astilibe spp.
Avens	Geum triflorum
Baby's Breath	Gypsophila elegans

Baby's Breath Gypsophila paniculata Beard-Tongue Penstemon spp. Bellflower Campanula spp. Bellflower, Willow Campanula persicifolia Caesalpinia Bird of Paradise pulcherrima Black-eyed Susant Rudbeckia hirta Blanket Flower† Gaillardia aristata Blanket Flowert Gaillardia x grandiflora Bleeding Heart Dicentra spectabilis Butterfly Weed Asclepias tuberosa California Poppy Eschscholzia california Calla Lily Zantedeschia aethiopica

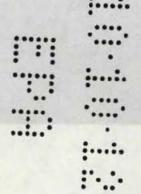
Page 19

Canna generalis 'Lucifer'

# PERENNIALS (continued)

Canna, Common Garden

Common Name	Scientific Name
Carex	Carex spp.
Chincherinchee	Ornithogalum thyrsoides
Clover, Crimson†	Trifolium incarnatum
Columbine	Aquilegia 'McKana Giant'
Columbine	Aquilegia x hybrida
Coreopsis (tickseed)†	Coreopsis lanceolata
Crinum Lily	Crinun spp.
Crocus	Crocus spp.
Daffodil	Narcissus spp.
Daylily	Hemerocallis spp.
Fairy Duster	Calliandra eriophylla
Fern, Asparagus	Asparagus officinalis
Fern, Boston	Nephrolepis exaltata
Fern, Hay-scented	Dennstaedtia punctilobula
Fern, Leatherleaf*	Rumohra adiantiformis
Fortnight Lily	Moraea spp.
Foxglove	Digitalis purpurea
Freesia	Freesia x hybrida
Gaillardia	Gaillardia pulchella
Geum	Geum spp.
Gladiolus	Gladiolus spp.
Heather, Dwarf	Calluna vulgaris
Hosta	Hosta spp.
Indian Blanket†	Gaillardia pulchella
Iris, Japanese	Iris kaemphera



Lantana, Weeping Lantana montevidensis Doronicum cordatum Leopards Bane Lily Lillium spp. Liriope, Big Blue Liriope muscari Liriope, Creeping Liriope spicata Liriope, Variegated Liriope muscari Moonbeam Coreopsis verticillata Montbretia Crocosmia crocosmiiflora Mugwort, Western Artemesia hudoviciana Solamon spp. Nightshade Orchid, Peacock Acidanthera bicolor Oxeye Daisy† Chrysanthemum leucanthemum Palm, Areca Chysalidocarpus Intescens Palm, Pygmy Date Phoenix roebelence Palm, Washington Washington robusta Peony, Chinese Paeonia lactiflora Purple Coneflower† Echinacea purpurea

# PERENNIALS (continued)

PERENNIALS (CONTIN	aca)
Common Name	Scientific Name
Purple Gay-feather	Liatris pycnostachys
Purple Loosestrife	Lythrum virgatum
Rodgersia	Rodgersia henricie
Rosemary	Rosmarinus officinalis
Sedge	Carex spp.
Shasta Daisy†	Chrysanthemum x superbum
Statice	Limonium latifolia
Statice, German	Goniolimon tartaricum
Sweet Flag	Acorus calamus .
Tickseed†	Coreopsis lanceolata
Texas Bluebonnet	Lupinus texenis
Tulip	Tulipa spp.
Wonder Flower	Ornithogalum thyrsoides
Yarrow†	Achillea millefolium
Zephyr Lily	Zephyranthes spp.

\* Applications of UP-End herbicide to immature ferns (during periods of new growth of fronds) may result in some injury.

These plants have shown tolerance to UP-End applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed.

ORNAMENTAL GRASSES.

CONTRACTOR OF THE PERSON OF TH	TO THE REAL PROPERTY OF THE PARTY OF THE PAR
Common Name	Scientific Name
••••	
	*****

Page 20

Beach Grass	Ammophila breviligulata
Fescue, Blue	Festuca glauca
Fescue, Sheep	Festuca ovina
Fountain Grass	Pennisetum setaceum
Pampas Grass	Cortaderia selloana
Reed Canary Grass	Phalaris arundinacea
Reed, Giant	Arundo spp.
Ribbon Grass	Phalaris arundinacea
Tufted Hair Grass	Deschampsia caespitosa

# BEDDING PLANTS

Common Name	Scientific Name
Ageratum	Ageratum houstonianum
Alyssum*	Alyssum saxatile
Anemone, Poppy-flowered	Anemone coronaria
Artemesia	Artemesia spp.
Balloonflower	Platycodon grandiflorum
Begonia*	Begonia spp.
Cabbage, Ornamental	Brassica olereacea

# BEDDING PLANTS (continued)

Common Name	Scientific Name
Caladium	Caladium spp.
Cast-Iron Plant	Aspidistra elatior
China Aster*	Callisiephus chinensi.
Crocosmia, Montebretia	Crocosmia x crocosmiiflora
Dahlia*	Dahlia spp.
Dianthus	Dianthus barbatus
Dusty Miller	Senecio cineraria
Gayfeather	Liatris spp.
Gazania, Treasure Flower	Gazania rigens
Gazania, Trailing	Gazania rigens leucolaena
Gloxinia	Gloxinia simningia
Kale, Ornamental	Brassica napus
Marigold, African	Tagetes erecta
Moss Rose*	Portulaca grandiflora
Mum, Garden	Chrysanthemum spp.
Periwinkle*	Vinca major
Periwinkle, Rose	Catharanthus roseus
Petunia*	Petunia spp.
Plumosa Cockscomb	Celosia cristata
Portulaca*	Portulaca grandiflora
Salvia*	Salvia splendens
Snapdragon	Antirrhinum majus
Statice*	Limonium spp.
Sweet William	Dianthus barbatus
Vinca*	Vinca major

 Do not apply UP-End sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.

UP-End herbicide may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of such plants at the specified rate. Evaluate treated plants 1-2 months following treatment for possible injury.

# STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal

PESTICIDE STORAGE: DO NOT STORE BELOW 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse after emptying, then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Containers less than or equal to 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Containers larger than 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on it end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

# IMPORTANT INFORMATION

#### READ BEFORE USING PRODUCT

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.



United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

DRIVE, ARSENAL, SAHARA, PLATEAU and VANTAGE are registered trademarks of BASF Corporation.

AquaCap is a trademark of BASF Corporation.

Roundup and Roundup PRO are registered trademarks of Monsanto Company.

Karmex and Oust are registered trademarks of E. I. duPont de Nemours and Company,

Finale is a registered trademark of Bayer AG.

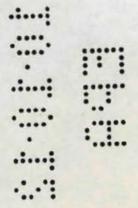
Ornamec and Trimec are registered trademarks of PBI Gordon Corp.

Three Way is a registered trademark of Lesco Technologies, LLC.

Gallery is a registered trademark of Dow AgroSciences.

Princep is a registered trademark of Syngenta.

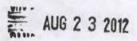
Rev. 7/12/108/14/12





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Ms. Rebecca A. Clemmer United Phosphorus, Inc. 630 Freedom Business Center Suite 402 King of Prussia, PA 19406

Dear Ms. Clemmer:

Subject:

Pendi Hydrocap

Review of Basic and Alternates #1, #2, and #3 (CSFs)

EPA Reg. No. 70506-230

Your Submission Dated: May 24, 2012

The amendment referred to above, submitted in connection with registration under The Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended is acceptable.

The basic and alternates #1 and #3 (all dated 08-21-12) and alternate #2 (dated 05-22-12) are acceptable and have been added to your record as current and updated. The basic CSF (dated 08-21-12) must supersede all other basic CSFs on file.

Please contact Juanita Gilchrist on 703 305-6965, or gilchrist.juanita@epa.gov if you any have questions.

Sincerely,

Kable Bo Davis

Product Manager (25)

Herbicide Branch

Registration Division (7505P)



# United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax)

Rebecca A. Clemmer Regulatory Manager

May 24, 2012

Bo Kable Davis (PM 25)
Document Processing Desk (MFC)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

Pendi Hydrocap (EPA Reg. No. 70506-230)

Alternate formulas

Dear Mr. Davis:

United Phosphorus, Inc. is submitting the enclosed Confidential Statements of Formula for Agency approval. The purpose of the alternates is to add UPI's technical pendimethalin (recently registered under 70506-246) as a source of active ingredient. Because of a difference in percent active ingredient, there has been a slight adjustment to another ingredient to compensate.

Enclosed please find Confidential Statements of Formula alternates 2 and 3, both dated May 22, 2012, for your approval.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com



# United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax)

Rebecca A. Clemmer Regulatory Manager

May 24, 2012

Bo Kable Davis (PM 25)
Document Processing Desk (MFC)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

Pendi Hydrocap (EPA Reg. No. 70506-230)

Alternate formulas

Dear Mr. Davis:

United Phosphorus, Inc. is submitting the enclosed Confidential Statements of Formula for Agency approval. The purpose of the alternates is to add UPI's technical pendimethalin (recently registered under 70506-246) as a source of active ingredient. Because of a difference in percent active ingredient, there has been a slight adjustment to another ingredient to compensate.

Enclosed please find Confidential Statements of Formula alternates 2 and 3, both dated May 22, 2012, for your approval.

Please contact me if you have any questions.

Very truly yours,

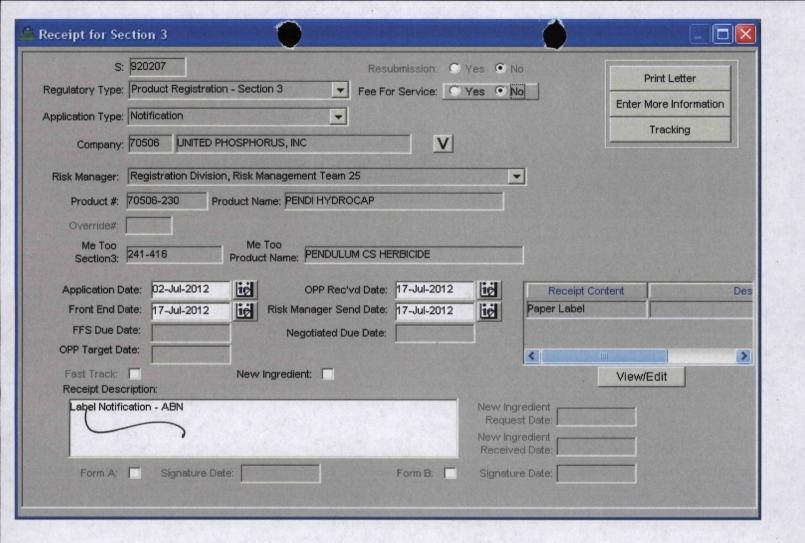
Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

# Material to be added to an e-Jacket/Jacket

	Reg. No. 70506-230
Description:	Notification
1. □ Send	to Data Extraction contractors this material:
	□ Newly stamped accepted label
	Notification 7/3//2
	□ New CSF
	□ Other:
must be we Then give Informatio	his coversheet to the top of the material or jacket. It ell organized and clipped together, NOT STAPLED. the material with this coversheet to staff in the n Services Center (Room S-4900).
Reviewe	er's Name: Hope D.
Phone: _	5-5410 Division: RD
Date: _	7/31/12

Created June 21, 2012





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Ms. Rebecca A. Clemmer United Phosphorus, Inc. 630 Freedom Business Center Suite 402 King of Prussia, PA 19406

JUL 3 1 2012

Subject: Notification per PR Notice 98-10

Pendi Hydrocap Herbicide EPA Reg. No. 70506-230 Application dated July 2, 2012

Dear Ms. Clemmer:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 of the subject product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been date-stamped "Notification" and will be placed in our records.

The alternate brand name "Phoenix Hammerkop HydroCap Herbicide" has been added to your file.

If you have any questions, please contact Hope Johnson at 703-305-5410.

Sincerely,

Kable Bo Davis Product Manager 25

Herbicide Branch

Registration Division (7505P)



# United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax) Rebecca A. Clemmer Regulatory Manager

July 2, 2012

Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

Pendi Hydrocap Herbicide (EPA Reg. No. 70506-230)

Notification of Alternate Brand Name

Dear Mr. Davis:

United Phosphorus, Inc. is notifying the Agency of the use of an alternate brand name for the product Pendi Hydrocap Herbicide. The alternate name is <a href="https://example.com/Phoenix Hammerkop HydroCap">Phoenix Hammerkop HydroCap</a> herbicide.

In support of this action, enclosed please find: a marked copy of the label; clean copy of the label; and EPA form 8570-1.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

Form Approved, OMB No. 2070-	0060, Approval expires 5-31-98
Registration	OPP Identifier Number

9	EPA	
-		

# **United States**

Registration	OF
Amendment	

m	er	d	m	el	nt	

		gton, DC 2046		_	
	App	plication fo	r Pesticide - Section		
<ol> <li>Company/Product Number 70506-230</li> </ol>			EPA Product Ma     Bo Kable Davis	anager	3. Proposed Classification
<ol> <li>Company/Product (Name) United Phosphorus, Inc/UP-E</li> </ol>			PM # 25		None Restricted
5. Name and Address of App United Phosphorus, Inc. 630 Freedom Business Cente King of Prussia, PA 19406	licant (Include ZIP Code)		6. Expedited Revi	ew. In accorda	ance with FIFRA Section 3(c)(3) tical in composition and labeling
Check if this is a new ac	ddress		Product Name		
		S	ection - II		ALL PROPERTY AND ADDRESS OF THE PARTY AND ADDR
Amendment – Explain b	elow			labels in respons	onse to
Resubmission in respon	ise to Agency letter dated		"Me Too" Ap		
X Notification – Explain be	elow		Other - Exp	lain below	
to the labeling or the confiden	Name: Phoenix Hamme with the provisions of PR tial statement of formula her understand that if this	rkop HydroCa Notice 98-10 of this product notification is	p herbicide and EPA regulations at 40 . I understand that it is a vinot consistent with the terr	iolation of 18 U ms of PR Notice	nd no other changes have been mad .S.C. Sec. 1001 to willfully make any e 98-10 and 40 CFR 152.46, this 12 and 14 of FIFRA.
A STATE OF THE REAL PROPERTY.		5	Section III		
Material This Product Will	be Packaged in:	8	Section III		
	be Packaged in: Unit Packaging Yes No	\$	Water Soluble Packaging Yes No	g	2. Type of Container  Metal Plastic Glass
Child-Resistant Packaging Yes No *Certification must	Unit Packaging Yes	No. per container	Water Soluble Packaging Yes	No. per container	Metal Plastic
Child-Resistant Packaging Yes No *Certification must be submitted	Unit Packaging Yes No If "Yes" Unit Packaging wgt.	No. per container	Water Soluble Packaging Yes No If "Yes"	No. per container	Metal Plastic Glass Paper
Child-Resistant Packaging Yes No *Certification must be submitted 3. Location of Net Contents II Label	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container	No. per container  4. Size(s) I	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container graph r glued	No. per container	Metal Plastic Glass Paper Other (Specify)  ocation of label directions On Label
Child-Resistant Packaging Yes No *Certification must be submitted 3. Location of Net Contents I Label 6. Manner in Which Label is A	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container  Affixed to Product	No. per container  4. Size(s) I  Lithog Paper Stend	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container  graph r glued citled  Section IV	No. per container  5. L Other	Metal Plastic Glass Paper Other (Specify)  ocation of label directions On Label On Label accompanying product
Child-Resistant Packaging Yes No Certification must be submitted  3. Location of Net Contents II Label  6. Manner in Which Label is A	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container  Affixed to Product	No. per container  4. Size(s) I  Lithog Paper Stence Sidentification of	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container  graph r glued citled  Section IV	No. per container  5. L Other	Metal Plastic Glass Paper Other (Specify)  ocation of label directions On Label On Label accompanying product
Child-Resistant Packaging Yes No *Certification must be submitted 3. Location of Net Contents I Label 6. Manner in Which Label is A	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container  Affixed to Product	No. per container  4. Size(s) I  Lithog Paper Stend	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container  graph r glued citled  Section IV	No. per container  5. L Other Tele	Metal Plastic Glass Paper Other (Specify) Ocation of label directions On Label On Label accompanying product  To process this application.) phone No. (Include Area Code) 491-2828
Child-Resistant Packaging Yes No *Certification must be submitted 3. Location of Net Contents In Label 6. Manner in Which Label is A 1. Contact Person (Complete Name Rebecca A. Clemmer I certify that the statements I h I acknowledge that any knowing both under applicable law	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container  Affixed to Product  Items directly below for items directly below for items and the container are the container are the container and the container are the container are the container and the container are t	No. per container  4. Size(s) I  Lithog Paper Stence Sidentification of Title Regular Regular Regular Regular Regular Rement may be	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container  graph r glued cided  Section IV findividual to be contacted atory Manager  ats thereto are true, accurate punishable by fine or impressions.	No. per container  5. L  Other  Tele 610- e and complete.	Metal Plastic Glass Paper Other (Specify)  Ocation of label directions On Label On Label accompanying product  to process this application.) phone No. (Include Area Code) 491-2828  6. Date Application Received
Child-Resistant Packaging Yes No *Certification must be submitted 3. Location of Net Contents In Label 6. Manner in Which Label is A  1. Contact Person (Complete Name Rebecca A. Clemmer I certify that the statements I h I acknowledge that any knowin both under applicable law 2. Signature	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container  Affixed to Product  Items directly below for items directly below for items and agly false or misleading states.	No. per container  4. Size(s) I  Lithog Paper Stend  Title Regular Attachment may be a second attachme	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container  graph r glued cilled  Section IV findividual to be contacted atory Manager  ats thereto are true, accurate punishable by fine or imprese atory Manager	No. per container  5. L  Other  Tele 610- e and complete.	Metal Plastic Glass Paper Other (Specify) Ocation of label directions On Label On Label accompanying product  To process this application.) phone No. (Include Area Code) 491-2828  6. Date Application
*Certification must be submitted  3. Location of Net Contents In Label  6. Manner in Which Label is an	Unit Packaging Yes No If "Yes" Unit Packaging wgt.  Information Container  Affixed to Product  Items directly below for items directly below for items and agly false or misleading states.	No. per container  4. Size(s) I  Lithog Paper Stend  Title Regular Regular Attachment may be served.	Water Soluble Packaging Yes No If "Yes" Package wgt  Retail Container  graph r glued cided  Section IV findividual to be contacted atory Manager  ats thereto are true, accurate e punishable by fine or impresentatory Manager  te	No. per container  5. L  Other  Tele 610- e and complete.	Metal Plastic Glass Paper Other (Specify)  Ocation of label directions On Label On Label accompanying product  to process this application.) phone No. (Include Area Code) 491-2828  6. Date Application Received



GROUP 3 HERBICIDE

# Phoenix Hammerkop<sup>TM</sup> HydroCap<sup>TM</sup>

# Herbicide

For Preemergent Weed Control in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT	
pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2, 6-dinitrobenzenamine	38.7%
OTHER INGREDIENTS:	61.3%
TOTAL	
(1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous carri	ier.)

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
------------	---

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



United Phosphorus, Inc 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 1-800-247-1557 EPA Reg. No. 70506-230 EPA Est. No.

**Net Contents** 

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

# CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

# Personal Protective Equipment (PPE):

Some materials that are chemically resistant to these products are listed below. For more options, refer to Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

Follow manufacturer's instruction for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **ENGINEERING CONTROLS**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

Users should:

- · Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as
  possible, wash thoroughly and change into clean clothing.

# ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

# DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

Do not apply this product through any type of irrigation system.

UPI does not authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

Do not apply this product in a way that will contact workers or other persons either directly or through drift Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

Do not apply <u>UP\_ENDHAMMERKOP</u> HYDROCAP in greenhouses, shadehouses or other enclosed structures. Not for use for commercial seed production.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

# NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

# MODE OF ACTION

**UP EndHammerkop HydroCap** is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

# PRODUCT INFORMATION

APPLICATION USE SITES – for preemergence control of grasses and certain broadleaf weed species as they germinate.

Turfgrass sites (golf course, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas, such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.

Bulb plantings, non-bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants.

In and around field, liner and container ornamental production.

#### APPLICATION INSTRUCTIONS

**UP EndHammerkop HydroCap** will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use **UP EndHammerkop HydroCap** together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of **UP EndHammerkop HydroCap** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **UP EndHammerkop HydroCap** is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap tank-mix combinations will not cause crop injury. Over-application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap.

#### MIXING INSTRUCTIONS

<u>UP-EndHammerkop</u> HydroCap may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to <u>UP-EndHammerkop</u> HydroCap alone.

When using tank mixtures or sequential applications with <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

# **Mixing Instructions**

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing <u>UP EndHammerkop</u> HydroCap or <u>UP-EndHammerkop</u> HydroCap tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

# 2. UP-EndHammerkop HydroCap

When using **UP-EndHammerkop** HydroCap alone, add **UP-EndHammerkop** HydroCap to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

### 3. UP-EndHammerkop HydroCap Tank Mixes

Add the tank mixture ingredients in the order listed below before adding UP-EndHammerkop HydroCap:

- (a) Wettable Powder (WP) formulations make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations add the F formulation to the partially filled tank while agitating.
- (d) Add UP-EndHammerkop HydroCap to the partially filled tank while agitating.
- (e) Water Soluble Concentrate (WSC) formulations add the WSC formulation to the partially filled tanke while agitating.
- (f) Emulsifiable Concentrate (EC) formulations add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

# 5. BACKPACK SPRAYER

Begin with a clean spray tank. Fill the spray tank one-half full with clean water and add the required amount of <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

# 6. LIQUID FERTILIZERS



Before mixing, always test small quantities using a simple jar test. Add the required amount of UP-EndHammerkop HydroCap to a half filled spray tank while agitating; then add the fertilizer product. Complete filling spray tank to desired level.

# SPRAYING INSTRUCTIONS

#### GROUND APPLICATIONS

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area, using a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turfgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those listed. Do not apply when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. If contact occurs, rinse immediately with water to avoid staining. Do not mechanically scrub until the surface area is thoroughly rinsed. Allow treated turfgrass to dry before entering to avoid staining onto non-treated surfaces.

#### **AERIAL APPLICATIONS**

Apply uniformly in 5 or more gallons of water per acre. Take care to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. To avoid overlapping and possible crop injury, use a flagman or an automatic mechanical flagging unit on the aircraft.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipmentand weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Observe more stringent state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

# CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows
  produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower
  pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of
  increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger
  droplets than other orientations and is recommended practice. Significant deflection from the horizontal will
  reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types namewer
  spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back
  produce the largest droplets and the lowest drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

# APPLICATION HEIGHT

Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

# WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

## TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

## TEMPERATURE INVERSIONS

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

# SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

# Table 1. RESIDENTIAL , GOLF COURSE , COMMERCIAL AND OTHER NON-RESIDENTIAL TURFGRASS USES

**Application Rates For Preemergence Weed Control** 

		EndHammerkop H	ydroCap '	
Turfgrass Species	Weeds	fl. oz.	pints	Comments
		Product per 1,000 sq.ft.	Product per acre	
COOL SEASON G				
Bluegrass, Kentucky Fescue, Fine Fescue, Tall Ryegrass, Perennial	Barnyardgrass	All Turf Uses:		Make a repeat application of 2.2 to 3.1 pints/A (0.86 to 1.1 oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.
	Crabgrass Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Oxalis Poa annua Prostrate Spurge	1.1 to 1.6 fl oz 3.1 to 4.2 pints Initial application before weed germination in spring.		
	Purslane Goosegrass	Residential and Sod Farm		Make a repeat application of 3.1 pints/Acre (1.1 oz/1000 sq. ft.) if the lower rate was used initially or for
		Turf Uses Only <sup>2</sup> :		
		1.1 to 1.6 fl oz 3.1 to 4.2 pints  Golf Course, Commercial and Other Non- Residential Turf Uses Only:		
		1.1 to 2.3 oz	3.1 to 6.3 pints	extended goosegrass
			efore weed germination in	control after 5-8 weeks.
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annual	All Turf Uses:		Apply in late summer or
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Apply a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) after 5-8 weeks for extended <i>Poa annua</i> control.
Bentgrass or established Poa annua³ (1/2 inch height or taller)	Barnyardgrass Crabgrass	All Turf Uses		Make a repeat application of 2.2 to 3.1 pints/Acre (0.86 to 1.1 oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.
		(Non-Greens and Tees):		
	Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Poa annua Oxalis Prostrate Spurge Purslane	1.1 fl oz 3.1 pints Initial application before weed germination in spring.		
	Goosegrass	All Turf Uses (Non-Greens and Tees):		Apply a repeat application of 3.1
		1.1 fl oz	3.1 pints	pts/Acre (1.1 oz/1000 sq.
		Initial application before weed germination in spring.		ft.) for extended goosegrass control after 5-8 weeks.
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annua	All Turf Uses (Non-Greens and Tees):		Apply in late summer or early fall before weed
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	germination.

	UI.	2-EndHammerkop H	ydroCap 1	
Turfgrass Species Weeds		fl. oz.	pints	Comments
		Product per 1,000 sq.ft.	Product per acre	
WARM SEASON G	RASSES			The second second
Bahiagrass Bermudagrass			Residential and Sod Farm Turf Uses Only:	
Buffalograss	Evening Primrose	1.1 to 1.6fl oz	3.1 to 4.2 pints	pints/Acre (0.86 to 1.1
Centipedegrass Fescue, Tall	Fall Panicum Foxtail	Golf Course, Commercial and Other Non- Residential Turf Uses Only:		oz/1000 sq. ft.) after 5-8 weeks if necessary.
Paspalum,	Hop Clover	1.1 to 2.3 fl oz	3.1 to 6.3 pints	
seashore St. Augustinegrass Zoysiagrass	Knotweed Poa annua Oxalis Prostrate Spurge Purslane	Initial application before weed germination in spring.		
	Goosegrass	All Turf Uses (Non-Greens and Tees):		An additional application of 3.1 pt/Acre (1.1
	- A/F0/6	1.1 fl oz	3.1 pints	oz/1000 sq. ft.) may be
		Apply before weed germination in spring.		made for extended goosegrass control 8 weeks after the second application.
	The said	Make a second application at 3.1 pints (1.1 oz/1000 sq.ft.) 5-8 weeks later.		
	Chickweed	All Turf Uses:		Apply in late summer or
	Corn Speedwell Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Make a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) 5-8 weeks for extended <i>Poa annua</i> control.

Do not use more than 4.2 pints (2.1 quarts) per acre per application on residential and sod farm turfgrass. Do not use more than 6.3 pints (3.1 quarts) per acre per application on golf course turfgrass, commercial or other non-residential turfgrass.

The efficacy of <u>UP-EndHammerkop</u> HydroCap is best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If <u>UP-EndHammerkop</u> HydroCap is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is undesirable, <u>Do not rub or scrub surface</u>, <u>but rinse area immediately using a heavy spray of water</u> to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non-treated surfaces.

### TURFGRASS TANK MIXES

<u>UP-EndHammerkop</u> HydroCap can be mixed with postemergence herbicides to control emerged weeds in non-residential turfgrasses. For annual grass control, applications can be made with DRIVE<sup>®</sup> or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2-4,D and other similar products.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-EndHammerkop HydroCap and follow those that are most restrictive.

#### TURFGRASS RESTRICTIONS

Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.

<sup>&</sup>lt;sup>3</sup> Not for use on bentgrass or *Poa annua* greens or tees.

- Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application.
- On newly planted areas, do not apply until the turfgrass has filled in and has been mowed at least four times.
   Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.
- Do not use on bentgrass or *Poa annua* greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for at least three (3) months following the last UP-EndHammerkop HydroCap application.
- · Delay sprigging turfgrass for five (5) months after application.

#### LANDSCAPE AND GROUNDS MAINTENANCE

UP EndHammerkop HydroCap can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix UP-EndHammerkop HydroCap with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad-use application is made.

Refer to Table 2. Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

## ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use <u>UP EndHammerkop</u> HydroCap for grounds maintenance in noncropland areas, preemergence control of the weed species listed in and around established tree plantations for site preparation, and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. <u>UP EndHammerkop</u> HydroCap may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land. <u>UP EndHammerkop</u> HydroCap can also be used in Christmas trees and non-bearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to Table 2. Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas.

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on Instructions and Restrictions in Landscape and Ornamental Plantings before making an application.

For postemergence control of weeds, use tank-mix combinations of <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap plus VANTAGE®, Roundup®, Finale®, or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap and partner herbicides before use. Take care to prevent combination sprays from direct contact with desirable foliage or injury may result. <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

## ORNAMENTAL BULBS

UP EndHammerkop HydroCap may be applied for control of susceptible annual weeds in ornamental bulbs listed under the Perennial Section on the label (crocus, daffodil [narcissus], gladiolus, lilies, tulip, etc.). Apply UP EndHammerkop HydroCap before, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

## WILDFLOWERS

UP-EndHammerkop HydroCap may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (\*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of UP-EndHammerkop HydroCap at 4.2 pints (2.1 quarts) per acre. UP-EndHammerkop HydroCap may be applied to

established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply UP-EndHammerkop HydroCap no sooner than 4 weeks after wildflowers have emerged but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before making an application.

Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to **UP- EndHammerkop HydroCap** may vary greatly. Test desirable species carefully to determine if area-wide applications can be made.

#### NON-BEARING FRUIT AND NUTCROPS AND VINEYARDS

UP-EndHammerkop HydroCap may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Citrus Olive Pistachio
Apple Fig Peach Plum
Apricot Grape Pear Prune

Cherry Nectarine Pecan Walnut, English

#### NON-CROPLAND WEED CONTROL

Use <u>UP-EndHammerkop</u> HydroCap for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

## INDUSTRIAL (UNIMPROVED) TURF

UP-EndHammerkop HydroCap will provide preemergence control of the annual grasses and broadleaf weeds listed in Weed Species Controlled section of this label that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, DRIVE®, VANTAGE®, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

#### TOTAL VEGETATION CONTROL

UP EndHammerkop HydroCap may be tank mixed with ARSENAL®, SAHARA®, PLATEAU®, VANTAGE®, Roundup® PRO, Karmex®, Finale®, Oust®, diuron, glyphosate or other products to provide bare ground, or total vegetation control. UP EndHammerkop HydroCap can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with ARSENAL, SAHARA or PLATEAU herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For Kochia control, use a combination of <a href="https://example.com/up-end/4mmerkop"><u>UP-EndHammerkop</u></a> HydroCap with ARSENAL herbicide or diuron if control has been a problem for other herbicides.

## TABLE 2. APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS, AND OTHER NONCROP AREAS\*

For preemergence control of the weed species listed, apply **UP-EndHammerkop HydroCap** as follows:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 1 instructions.

For extended weed control, repeat applications of UP-EndHammerkop HydroCap can be made.

## INSTRUCTIONS AND RESTRICTIONS

## LANDSCAPE AND ORNAMENTAL PLANTINGS<sup>1</sup>

Site	Application Instructions and Restrictions
Landscape Plantings <sup>2</sup>	<ol> <li>Do not apply to newly-transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.</li> </ol>
	2. Apply as a directed or over-the-top spray.
	<ol><li>Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.</li></ol>
Ornamental Bulbs <sup>3</sup>	1. UP-EndHammerkop HydroCap may be applied to bulb species listed on the label.
	2. Apply before, during or after bulb emergence, but not during bloom.
Wildflowers <sup>3</sup>	UP EndHammerkop HydroCap may be applied in plantings of wildflowers listed on the label.  Refer to specific instructions for rate and plant tolerance.
	2. For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-EndHammerkop HydroCap or injury may occur.

### HAND-HELD SPRAY EQUIPMENT:

GRASSES CONTROLLED

Use table 2 above to determine the amount of UP-EndHammerkop HydroCap to be applied per 1000 square feet, in sufficient water for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP EndHammerkop HydroCap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any necessary cultivation must be shallow. UP EndHammerkop HydroCap may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants. A UP-EndHammerkop HydroCap treatment may be followed by any registered herbicide to control weeds not listed on the UP-EndHammerkop HydroCap label.

The efficacy of UP-EndHammerkop HydroCap will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if UP EndHammerkop HydroCap is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-EndHammerkop HydroCap at the above-specified rates:

Common Name	e Scientific Name Crab	
Barnyardgrass	Echinochloa crus-	Crowfootgras

galli

Bluegrass, Annual Poa annua Digitaria spp. Dactyloctenium aegyptium Foxtail, Giant Setaria faberi

<sup>&</sup>lt;sup>2</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

Foxtail, Green	Setaria viridis	Chickweed, Mouseear	Cerastium vulgatum
Foxtail, Yellow	Setaria glauca	Clover, Hop	Trifolium procumbens
Goosegrass	Eleusine indica	Cudweed	Gnaphalium spp.
Itchgrass	Rottboellia exaltata	Evening primrose	Oenothera biennis
Johnsongrass (from seed)	Sorghum halepense	Fiddleneck	Amsinckia intermedia
Junglerice	Echinochloa colona	Filaree	Erodium spp.
Lovegrass (from seed)	Eragrostis spp.	Henbit	Lamium amplexicaule
Panicum, Browntop	Panicum fasciculatum	Knotweed, prostrate	Polygonum aviculare
Panicum, Fall	Panicum	Kochia	Kochia scoparia
	dichotomiflorum	Lambsquarters	Chenopodium album
Panicum, Texas	Panicum texanum	Pigweed	Amaranthus spp.
Sandbur, Field	Cenchrus incertus	Puncturevine	Tribulus terrestris
Signalgrass	Brachiaria	Purslane	Portulaca oleracea
	platyphylla	Pusley, Florida	Richardia scabra
Sprangletop, Mexican	Leptochloa uninervia	Rocket, London	Sisymbrium irio
Sprangletop, Red	Leptochloa filiformis	Shepherdspurse	Capsella bursa-
Witchgrass	Panicum capillare		pastoris
Woolly Cupgrass	Eriochloa villosa	Smartweed, Pennsylvania	Polygonum
BROADLEAF WEEDS CO	ONTROLLED		pensylvanicum
Action with a control of the control		Speedwell, Corn	Veronica arvensis
Common Name	Scientific Name	Spurge, Annual	Euphorbia spp.
Burweed, Lawn	Soliva pterosperma	Spurge, Prostrate	Euphorbia humistrata
Carpetweed	Mollugo verticillata	Woodsorrel, Yellow	Oxalis stricta
Chickweed, Common	Stellaria media	Velvetleaf (Buttonweed)	Abutilon theophrasti

#### COMMERCIAL ORNAMENTAL PRODUCTION

#### GENERAL INFORMATION

Application Use Sites: **UP-EndHammerkop** HydroCap can be used in and around field, liner and container ornamental production.

**UP EndHammerkop HydroCap** sprays may be used around and over the top of the established plants listed in **Table 4** of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of **UP EndHammerkop HydroCap**. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

### APPLICATION INSTRUCTIONS

<u>UP-EndHammerkop</u> HydroCap will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment, or <u>UP-EndHammerkop</u> HydroCap may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

The efficacy of **UP-EndHammerkop HydroCap** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **UP-EndHammerkop HydroCap** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-EndHammerkop HydroCap.

#### SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous

agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water.

## INSTRUCTIONS AND RESTRICTIONS1 IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses, shadehouses or other enclosed structures.

Site	Application Instructions and Restrictions
Newly-Transplanted Field-Grown	<ol> <li>Do not make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.</li> </ol>
Nursery Stock <sup>2, 3</sup>	2. Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where UP-EndHammerkop HydroCap could come into contact with the roots.
	3. DO NOT apply during bud swell, bud break or at time of first flush of new growth.
	4. Direct sprays away from graphed or budded tissue on transplants at all times.
Newly-Transplanted Container-Grown Nursery Stock <sup>2,3</sup>	Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Care must be taken to ensure there are no cracks in the soil where      EndHammerkop HydroCap could come into contact with the roots.
	2. For container grown ornamentals, delay first application of the product to bareroot liners for two (2) weeks after transplanting.
	3. Do not apply during bud swell, bud break or at time of first flush of new growth.
	4. Direct sprays away from graphed or budded tissue on transplants at all times.
Established	Do not apply during bud swell, bud break or at time of first flush of new growth.
Container, or Field- Grown Nursery Stock <sup>2, 3</sup>	Apply as a directed or over-the-top spray.
	3. If newly budded or graphed rootstock, make an application using a shielded sprayer.
	4. Take care to ensure there are no cracks in the soil where <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap could come into contact with the roots.
Bare Ground for Container Placement	Apply to soil then water in (including mulch, gravel, wood chips, or other permeable base), replace containerized ornamentals onto pad.

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-EndHammerkop HydroCap or injury may occur.

Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE®, Roundup®, Finale®, Ornamec®, Gallery®, Princep®, and other similar products. Do not apply sprays containing Roundup or Finale over the top of ornamental plants.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-EndHammerkop HydroCap and follow those that are most restrictive.

#### CHRISTMAS TREE PLANTATIONS

UP-EndHammerkop HydroCap may be used in and around Christmas tree plantations. UP-EndHammerkop HydroCap may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent UP-EndHammerkop HydroCap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence control of weeds, use tank-mix combinations of <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap plus VANTAGE, Roundup, Finale, or other labeled herbicides. Refer to approved labeling for species information. Determine rates for the tank-mix compounds from the product labels of both <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap and partner herbicides before use. Precaution must be exercised to prevent combination sprays from direct contact with

<sup>&</sup>lt;sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

<sup>&</sup>lt;sup>3</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

desirable foliage or injury may result. **UP EndHammerkop HydroCap** plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict **UP EndHammerkop HydroCap** usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that Refer to **Table 3. Application Rates for Weed Control in Production Ornamentals**.

#### VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

UP-EndHammerkop HydroCap may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. UP-EndHammerkop HydroCap may be tank mixed with VANTAGE, Roundup PRO, Karmex<sup>®3</sup>, Finale<sup>®4</sup>, diuron, glyphosate or other products to provide bare ground or total vegetation control, or can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Application Rates For Weed Control In Production Ornamentals.

## Table 3. APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS\*

For preemergence control of the weed species listed, apply UP EndHammerkop HydroCap at the following rates:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For extended weed control, repeat applications of UP-EndHammerkop HydroCap can be made.

## HAND-HELD SPRAY EQUIPMENT:

Use the table above to determine the amount of <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP EndHammerkop HydroCap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP EndHammerkop HydroCap may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A UP EndHammerkop HydroCap treatment may be followed by any registered herbicide to control weeds not listed on the UP EndHammerkop HydroCap label.

The efficacy of <u>UP-EndHammerkop</u> HydroCap will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if <u>UP-EndHammerkop</u> HydroCap is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of <a href="https://example.com/UP-EndHammerkop">UP-EndHammerkop</a>
<a href="https://example.com/HydroCap">HydroCap</a> at the above-specified rates:</a>

#### GRASSES CONTROLLED

Common Name	Scientific Name
Barnyardgrass	Echinochloa crus-galli
Bluegrass, Annual	Poa annua
Crabgrass	Digitaria spp.
Crowfootgrass	Dactyloctenium aegyptium
Foxtail, Giant	Setaria faberi
Foxtail, Green	Setaria viridis

Foxtail, Yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaltata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, Browntop	Panicum fasciculatum
Panicum, Fall	Panicum dichotomiflorum
Panicum, Texas	Panicum texanum
Sandbur, Field	Cenchrus incertus

Signalgrass	Brachiaria platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa

## **BROADLEAF WEEDS CONTROLLED**

Common Name	Scientific Name	
Burweed, Lawn	Soliva pterosperma	
Carpetweed	Mollugo verticillata	
Chickweed, Common	Stellaria media	
Chickweed, Mouseear	Cerastium vulgatum	
Clover, Hop	Trifolium procumbens	
Cudweed	Gnaphalium spp.	
Eveningprimrose	Oenothera biennis	
Fiddleneck	Amsinckia intermedia	
Filaree	Erodium spp.	
Henbit	Lamium amplexicaule	
Knotweed, prostrate	Polygonum aviculare	
Kochia	Kochia scoparia	
Lambsquarters	Chenopodium album	
Pigweed	Amaranthus spp.	
Puncturevine	Tribulus terrestris	
Purslane	Portulaca oleracea	
Pusley, Florida	Richardia scabra	
Rocket, London	Sisymbrium irio	
Shepherdspurse	Capsella bursa-pastoris	
Smartweed, Pennsylvania	Polygonum pensylvanicum	
Speedwell, Corn	Veronica arvensis	
Spurge, Annual	Euphorbia spp.	
Spurge, Prostrate	Euphorbia humistrata	
Woodsorrel, Yellow	Oxalis stricta	
Velvetleaf (Buttonweed)	Abutilon theophrasti	

## **Table 4. ORNAMENTAL SPECIES**

UP EndHammerkop HydroCap sprays may be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to Table 3. Application Rates For Weed Control Production Ornamentals.

## TREES

Common Name	Scientific Name
Alder, European Black	Alnus glutinosa
Apple	Malus spp.
Arborvitae, American	Thuja occidentalis
Arbutus	Arbutus spp.
Ash, Red	Fraxinus
	pennsylvanica

Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus grandidentata
Aspen, Quaking	Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra

## TREES (continued)

TREES (continued)	
Common Name	Scientific Name
Buckeye, Red	Aesculus pavia
Cedar, White	Thuja occidentalis
Chamaecyparis, Boulevard	Chamaecyparis pisifera
Cherry, Black	Prunus serotina
Cherry, Choke	Prunus virginiana
Cherry, Kwanzan	Prunus serrulata
Cherry, Nanking	Prunus tomentosa
Cottonwood	Populus deltoides
Crabapple	Malus spp.
Crepe Myrtle	Lagerstroemia indica
Cryptomeria, Japanese Cedar	Cryptomeria japonica
Cypress, Bald	Taxodium distichum
Cypress, Leyland	Cupressocyparis leylandii
Dogwood, Flowering	Cornus florida
Dogwood, Korean	Cornus kousa
Dogwood, Silky	Cornus amomum
Dogwood, Shrub	Cornus spp.
Elm	Ulmus japonica
Elm, Winged	Ulmus alata
Eucalyptus (Silver-dollar) tree	Eucalyptus cinerea
Fir, Balsam	Abies balsamae
Fir, Douglas	Pseudotsuga menziesii
Fir, Fraser	Abies fraseri
Fir, White	Abies concolor
Franklinia	Franklinia spp.
Fringe tree	Chlonenthus retusus
Ginkgo	Ginkgo biloba
Gum, Black	Nyssa sylvatica
Gum, Sour	Nyssa sylvatica
Haw, Black	Viburnum prunifolium
Hawthorn	Crataegus spp.
Hemlock, Canada	Tsuga canadensis
Hemlock, Eastern	Tsuga canadensis
Holly, American	Ilex opaca
Honeylocust	Gleditsia triacanthos
Lilac, Common	Syringa vulgaris
Lilac, Japanese Tree	Syringa reticulata
Linden	Tilia spp.
	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM

Magnolia, Saucer	Magnolia soulangiana	Spruce, Dwarf Alberta	Picea glauca 'albertiana'
Magnolia, Southern	Magnolia grandiflora	Spruce, Norway	Picea abies
Magnolia, Star	Magnolia stellata	Spruce, White	Picea glauca
Maidenhair Tree	Ginkgo biloba	Sweetgum	Liquidambar
Maple, Norway	Acer platanoides		styraciflua
Maple, Japanese	Acer palmatum	Sycamore	Platanus occidentalis
Maple, Red	Acer rubrum	Trachycarpus	Trachycarpus spp.
Maple, Sugar	Acer saccharum	Tulip tree	Liriodendron
TREES (continued)	PLEASE LEVEL IN		tulipifera
Common Name	Scientific Name	TREES (continued)	2007
Nannyberry, Rusty	Viburnum rufidulum	Common Name	Scientific Name
Oak, Chinquapin	Quercus	Walnut, Black	Juglans nigra
	muehlenbergii	Willow, Weeping	Salix babylonica
Oak, Live	Quercus virginiana	Yellowwood	Cladrastis lutea
Oak, Pin	Quercus palustris	SHRUBS	
Oak, Red	Quercus rubra	Common Name	Scientific Name
Oak, Swamp Chestnut	Quercus michauxii	Abelia, Glossy	Abelia grandiflora
Oak, Water	Quercus nigra	Alder, Witch	Fothergilla gardenii
Oak, White	Quercus alba	Aucuba, Gold	Aucuba japonica
Oak, Willow	Quercus phellos	Azalea	Rhododendron sp.
Olive	Olea europaea	Bamboo, Heavenly	Nandina domestica
Palm, Date	Phoenix spp.	Barberry	Berberis Berberis
Palm, Fan	Washingtonia spp.	Barberry	gladwynensis
Palm, Pindo	Butia spp.	Barberry, Japanese	Berberis thunbergii
Palm, Washington	Washingtonia spp.	Blue Indigo Bush	Dalea gregii
Peach	Prunus persica	Bottlebrush, Lemon	Callistemon citrinus
Pear, Bradford	Pyrus calleryana	Boxwood, Common	Buxus sempervirens
	'Bradford'	Boxwood, Japanese	Buxus microphylla
Pecan	Carya illinoensis	Brittlebush	Encelia farinosa
Pine, Austrian	Pinus nigra	Buttonbush	Cephalanthus
Pine, Italian Stone	Pinus pinea		occidentalis
Pine, Loblolly	Pinus taeda	Camellia	Camellia japonica
Pine, Monterey	Pinus radiata	Cape Jasmine	Gardenia jasminoides
Pine, Red	Pinus resinosa	Cassia, Feathery	Cassia artemisioides
Pine, Scotch	Pinus sylvestris	Cordyline	Cordyline spp.
Pine, Virginia	Pinus virginiana	Correa	Correa spp.
Pine, White	Pinus strobus	Cotoneaster	Cotoneaster
Plum, Purple Leaf	Prunus cerasifera		apiculatus
Poplar, Black	Populus nigra	Cotoneaster, Bayberry	Cotoneaster dammer
Redcedar, Eastern	Juniperus virginiana	Cotoneaster, Rock	Cotoneaster
Redcedar, Western	Thuja plicata		horizontalis
Red Ironbark	Eucalyptus sideroxylon 'Rosea'	Cypress, Italian	Cupressus sempervirens
Redwood, Dawn	Metasequoia glyptostroboides	Cypress, Leyland	Cupressocyparis leylandii
Sequoia, Giant	Sequoiadendron	Deutzia, Slender	Deutzia gracilis
	giganteum	Dogwood, Red Twig	Cornus sericea
Serviceberry	Amelanchier laevis	Elaeagnus	Elaeagnus ebbingei
Sourwood	Oxydendrum	Escallonia	Escallonia fradesii
	arboreum	Euonymus	Euonymus fortunei
Spruce, Colorado Blue	Picea pungens		

Euonymus, Golden	Euonymus japonica
Euonymus, Winged	Euonymus alata
Firethorn	Pyracantha coccinea
Forsythia, Border	Forsythia intermedia
Fragrant Olive	Osmanthus fragrans
Fuschia, California	Zauschineria californica
Gardenia	Gardenia jasminoides
Hawthorne, Indian	Raphiolepis indica
Hibiscus	Hibiscus syriacus
Holly, Chinese	Ilex cornuta
SHRUBS (continued)	

SHRUBS (continued)	
Common Name	Scientific Name
Holly, Japanese	Ilex crenata
Holly, Fosters	Ilex attenuata 'Fosteri'
Holly, Savannah	Ilex attenuata
Holly, Yaupon	Ilex vomitoria
Honeysuckle, Bush	Diervilla lonicera
Hopseed Bush	Dodonaea viscosa
Hopbush	Dodonaea viscosa
Hydrangea	Hydrangea macrophylla
Juniper	Juniperus sp.
Juniper, Chinese	Juniperus chinensis v. pfitzer
Juniper, Shore	Juniperus conferta
Juniper, Trailing	Juniperus horizontalis
Laurel, Cherry	Prunus laurocerasus
Laurel, Mountain	Kalmia latifolia
Laurel, Otto Luyken	Prunus laurocerasus
Laurel, Schipka	Prunus schipkanensis
Laurustinus	Viburnum tinus
Lavender, English	Lavandula angustifolia
Leucothoe	Leucothoe fontanesiana
Leucothoe, Coast	Leucothoe axillaris
Lilac, Cut-leaf	Syringa laciniata
Lily-of-the-Nile	Agapanthus africanus
Mahonia	Mahonia aquifolium
Mock Orange	Pittosporum tobira
Myrtle, Compact	Myrtus communis
Myrtle, Wax	Myrica cerifera
Nandina	Nandina domestica
Oleander	Nerium oleander
Oregon Grape	Mahonia aquifolium
Osmanthus	Osmanthus fragrans
Palm, European Fan	Chamaerops humilis
Palm, Mediterranean Fan	Chamaerops spp.
Phlox, Prickly	Leptodactylon californicum

Photinia, Fraser	Photinia x Fraseri
Pieris, Japanese	Pieris japonica
Pine, Mugo	Pinus mugo
Plum, Natal	Carissa grandiflora
Privet, California	Ligustrum ovalifolium
Privet, Glossy	Ligustrum lucidum
Privet, Variegated	Ligustrum sinensis
Privet, Waxleaf	Ligustrum japonicum
Pyracantha	Pyracantha coccinea
Quince, Flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens

## SHRUBS (continued)

Common Name	Scientific Name
Redroot	Ceanothus spp.
Rhododendron	Rhododendron spp.
Robira	Pittosporum tobira
Rose	Rosa spp.
Spice Plant	Illicium parviflorum
Spiraea	Spiraea vanhouttei
Spiraea, Anthony Waterer	Spiraea X bumalda
Spiraea, Japanese	Spiraea japonica
Sweet Bay	Laurus nobilis
Trumpet Bush	Tecoma stans
Verbena, Lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild Lilac	Ceanothus spp.
Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern*	Podocarpus macrophyllus
Yucca, Adam's Needle	Yucca filamentosa
Yucca, Weeping	Yucca pendula

<sup>\*</sup> Do not apply UP-EndHammerkop HydroCap during spring growth or injury to terminals may occur.

## **GROUND COVERS**

Common Name	Scientific Name
Ajuga	Ajuga reptans
Baby Sun Rose	Aptenia cordifolia
Beach Strawberry	Fragaria chiloensis
Capeweed	Arctotheca calendula
Cinquefoil, Spring	Potentilla verna
Coyotebrush, Dwarf	Baccharis pitularis

Daisy, Trailing African	Osteospermum fruticosum
Dymondia	Dymondia margaretae
Gazania	Gazania splendens
Iceplant, Large Leaf	Carpobrotus edulis
Ivy, English	Hedera helix
Ivy, Geranium	Pelargonium peltatum
Jasmine, Asiatic	Trachelospermum asiaticum
Jasmine, Primrose	Jasminum mesnyi
Jessamine, Carolina	Gelsemium sempervirens
Manzanita, Bearberry	Arctostaphylos uva-ursi

## GROUND COVERS (continued)

Common Name	Scientific Name
Miscanthus	Miscanthus spp.
Mondograss	Ophiopogon japonica
Morning glory	Convolvulus spp.
Myoporum	Myoporum parviflolium
Pachysandra	Pachysandra terminalis
Potentilla	Potentilla fruticosa
Red Apple	Aptenia cordifolia
Rosemary	Rosemarinus officinalis
Rose-Of-Sharon	Hypericum calycinum
Sand Strawberry	Fragaria chiloensis
Sedum	Sedum spurium
St. Johnswort, Creeping	Hypericum calycinum
Stonecrop	Sedum spurium
Verbena, Peruvian	Verbena peruviana
Vervain	Verbena peruviana
Vetch, Crown	Vicia sativa
Vinca	Vinca minor
Wintercreeper	Euonymous fortunei

## PERENNIALS

Scientific Name
Acacia redolens
Asparagus spp.
Aster novi-belgii
Stokesia laevis
Astilibe spp.
Geum triflorum
Gypsophila elegans
Gypsophila paniculata
Penstemon spp.
Campanula spp.

Bellflower, Willow	Campanula persicifolia
Bird of Paradise	Caesalpinia pulcherrima
Black-eyed Susan†	Rudbeckia hirta
Blanket Flower†	Gaillardia aristata
Blanket Flower†	Gaillardia x grandiflora
Bleeding Heart	Dicentra spectabilis
Butterfly Weed	Asclepias tuberosa
California Poppy	Eschscholzia california
Calla Lily	Zantedeschia aethiopica
Canna, Common Garden	Canna generalis 'Lucifer'

## PERENNIALS (continued)

Common Name	Scientific Name		
Carex	Carex spp.		
Chincherinchee	Ornithogalum thyrsoides		
Clover, Crimson†	Trifolium incarnatum		
Columbine	Aquilegia 'McKana Giant'		
Columbine	Aquilegia x hybrida		
Coreopsis (tickseed)†	Coreopsis lanceolata		
Crinum Lily	Crinum spp.		
Crocus	Crocus spp.		
Daffodil	Narcissus spp.		
Daylily	Hemerocallis spp.		
Fairy Duster	Calliandra eriophylla		
Fern, Asparagus Asparagus offic			
Fern, Boston Nephrolepis			
Fern, Hay-scented	Dennstaedtia punctilobula		
Fern, Leatherleaf*	Rumohra adiantiformis		
Fortnight Lily	Moraea spp.		
Foxglove	Digitalis purpurea		
Freesia	Freesia x hybrida		
Gaillardia	Gaillardia pulchella		
Geum	Geum spp.		
Gladiolus	Gladiolus spp.		
Heather, Dwarf	Calluna vulgaris		
Hosta Hosta spp.			
ndian Blanket† Gaillardia pulche			
ris, Japanese Iris kaemphera			
Lantana, Weeping	Lantana montevidensis		
Leopards Bane	Doronicum cordatum		
Lily	Lillium spp.		
Liriope, Big Blue	Liriope muscari		

Liriope, Creeping	Liriope spicata
Liriope, Variegated	Liriope muscari
Moonbeam	Coreopsis verticillata
Montbretia	Crocosmia crocosmiiflora
Mugwort, Western	Artemesia ludoviciana
Nightshade	Solanum spp.
Orchid, Peacock	Acidanthera bicolor
Oxeye Daisy†	Chrysanthemum leucanthemum
Palm, Areca	Chysalidocarpus lutescens
Palm, Pygmy Date	Phoenix roebelence
Palm, Washington	Washington robusta
Peony, Chinese	Paeonia lactiflora
Purple Coneflower†	Echinacea purpurea

## PERENNIALS (continued)

Common Name	Scientific Name
Purple Gay-feather	Liatris pycnostachys
Purple Loosestrife	Lythrum virgatum
Rodgersia	Rodgersia henricie
Rosemary	Rosmarinus officinalis
Sedge	Carex spp.
Shasta Daisy†	Chrysanthemum x superbum
Statice	Limonium latifolia
Statice, German	Goniolimon tartaricum
Sweet Flag	Acorus calamus
Tickseed†	Coreopsis lanceolata
Texas Bluebonnet	Lupinus texenis
Tulip	Tulipa spp.
Wonder Flower	Ornithogalum thyrsoides
Yarrow†	Achillea millefolium
Zephyr Lily	Zephyranthes spp.

- \* Applications of <a href="UP-EndHammerkop">UP-EndHammerkop</a> HydroCap to immature ferns (during periods of new growth of fronds) may result in some injury.
- † These plants have shown tolerance to UP-EndHammerkop HydroCap applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed.

## ORNAMENTAL GRASSES

Common Name	Scientific Name
Beach Grass	Ammophila breviligulata
Fescue, Blue	Festuca glauca
Fescue, Sheep	Festuca ovina

Fountain Grass	Pennisetum setaceum
Pampas Grass	Cortaderia selloana
Reed Canary Grass	Phalaris arundinacea
Reed, Giant	Arundo spp.
Ribbon Grass	Phalaris arundinacea
Tufted Hair Grass	Deschampsia caespitosa

## BEDDING PLANTS

Common Name	Scientific Name
Ageratum	Ageratum houstonianum
Alyssum*	Alyssum saxatile
Anemone, Poppy-flowered	Anemone coronaria
Artemesia	Artemesia spp.
Balloonflower	Platycodon grandiflorum
Begonia*	Begonia spp.
Cabbage, Ornamental	Brassica olereacea

## **BEDDING PLANTS (continued)**

Common Name	Scientific Name	
Caladium	Caladium spp.	
Cast-Iron Plant	Aspidistra elatior	
China Aster*	Callistephus chinensis	
Crocosmia, Montebretia	Crocosmia x crocosmiiflora	
Dahlia*	Dahlia spp.	
Dianthus	Dianthus barbatus	
Dusty Miller	Senecio cineraria	
Gayfeather	Liatris spp.	
Gazania, Treasure Flower	Gazania rigens	
Gazania, Trailing	Gazania rigens leucolaena	
Gloxinia	Gloxinia simningia	
Kale, Ornamental	Brassica napus	
Marigold, African	Tagetes erecta	
Moss Rose*	Portulaca grandiflora	
Mum, Garden	Chrysanthemum spp.	
Periwinkle*	Vinca major	
Periwinkle, Rose	Catharanthus roseus	
Petunia*	Petunia spp.	
Plumosa Cockscomb	Celosia cristata	
Portulaca*	Portulaca grandiflora	
Salvia*	Salvia splendens	
Snapdragon	Antirrhinum majus	
Statice*	Limonium spp.	
Sweet William	Dianthus barbatus	
Vinca*	Vinca major	

<sup>\*</sup> Do not apply UP-EndHammerkop HydroCap sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.

**UP-EndHammerkop HydroCap** may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of

such plants at the specified rate. Evaluate treated plants 1-2 months following treatment for possible injury.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** DO NOT STORE BELOW 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse after emptying, then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Containers less than or equal to 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Containers larger than 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on it end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

## IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

DRIVE, ARSENAL, SAHARA, PLATEAU and VANTAGE are registered trademarks of BASF Corporation.

Roundup and Roundup PRO are registered trademarks of Monsanto Company.

Karmex and Oust are registered trademarks of E. I. duPont de Nemours and Company.

Finale is a registered trademark of Bayer AG.

Ornamec and Trimec are registered trademarks of PBI Gordon Corp.

Three Way is a registered trademark of Lesco Technologies, LLC.

Gallery is a registered trademark of Dow AgroSciences.

Princep is a registered trademark of Syngenta.

Rev. 7/2/12

# Material Sent for Data Extraction

Reg. #
Description: Nothication
☐ Material(s) Sent to Data Extraction Contractors:
New Stamped Label Dated
Notification Dated 6-21-12
☐ New CSF(s) Dated
☐ Other:
☐ Decision #:
Other Action/Comments:
File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring down to the (ISC). For further information please call 703-605-0716.
Reviewer: Maggie Rudick
Phone: 703-347-0257 Division: RD/HB  Date: 6-21-12



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

JUN 2 1 2012

Rebecca Clemmer United Phosphorus, Inc. 630 Freedom Business Center Suite 402 King of Prussia, PA 19406

Subject:

Notification per PR Notice 98-10 - Add Alternate Brand Name and add Resistance

Management Group Number

Pendi Hydrocap

EPA Reg. No. 70506-230

Application Dated - June 4, 2012

Proposed Alternate Name: Up-End HydroCap Herbicide

Dear Ms. Clemmer:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the subject product.

The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been date-stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact Maggie Rudick at (703) 347-0257 or <a href="maggie@epa.gov">rudick.maggie@epa.gov</a>.

Sincerely,

Kable Bo Davis, Product Manager 25

Herbicide Branch

Registration Division (7505P)



GROUP

3

HERBICIDE

## UP-End UP-End HydroCapTM

## Herbicide

For Preemergent Weed Control in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT	
pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2, 6-dinitrobenzenamine	38.7%
OTHER INGREDIENTS:	61.3%
TOTAL	100.0%

(1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous carrier.)

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

## FIRST AID

If in eyes

- · Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.
- · Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical treatment, call the Rocky Mountain Poison Control Center at 1-866-673-6671.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



United Phosphorus, Inc 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 EPA Reg. No. 70506-230 EPA Est. No.

1-800-247-1557 • www.upi-usa.com

Formatted: Default Paragraph Font

Net Contents

NOTIFICATION JUN 2 1 2012





# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### Personal Protective Equipment (PPE):

Some materials that are chemically resistant to these products are listed below. For more options, refer to Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

Follow manufacturer's instruction for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- · Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as
  possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

### DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

Do not apply this product through any type of irrigation system.

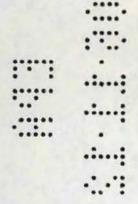
UPI does not authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

Do not apply UP-ENDUP-END HYDROCAP-herbicide in greenhouses, shadehouses or other enclosed structures.

Not for use for commercial seed production.





## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- · Coveralls
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

### MODE OF ACTION

UP-End UP-End HydroCap is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

## PRODUCT INFORMATION

APPLICATION USE SITES - for preemergence control of grasses and certain broadleaf weed species as they germinate.

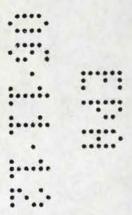
Turfgrass sites (golf course, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas, such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.

Bulb plantings, non-bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants.

In and around field, liner and container ornamental production.





William.

#### APPLICATION INSTRUCTIONS

UP-EndUP-End HydroCap will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use UP-EndUP-Ind HydroCap together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of UP-EndUP-End HydroCap will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-EndUP-End HydroCap is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, UP-EndUP-End HydroCap or UP-EndUP-End HydroCap tank-mix combinations will not cause crop injury. Over-application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-EndUP-End HydroCap.

#### MIXING INSTRUCTIONS

<u>UP-End UP-End HydroCap</u> may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to <u>UP-End-UP-End-HydroCap</u> alone.

When using tank mixtures or sequential applications with <a href="https://www.up-End-UP-End-HydroCap">UP-End-UP-End-HydroCap</a>, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

#### Mixing Instructions

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing UP-EndUP-End HvdroCap tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

#### 2. UP-EndUP-End HydroCap

When using UP-EndUP-End HydroCap alone, add UP-EndUP-End EydroCap to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

### 3. UP-EndUP-End HydroCan Tank Mixes

Add the tank mixture ingredients in the order listed below before adding UP-EndUP-End HydroCap.

- (a) Wettable Powder (WP) formulations make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations add the F formulation to the partially filled tank while agitating.
- (d) Add UP-End UP-End HydroCap to the partially filled tank while agitating.
- (e) Water Soluble Concentrate (WSC) formulations add the WSC formulation to the partially filled tank while agitating.
- (f) Emulsifiable Concentrate (EC) formulations add the EC formulation to the partially filled tank while agitating.

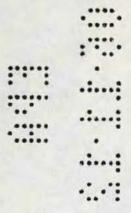
Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

#### 5. BACKPACK SPRAYER

Begin with a clean spray tank. Fill the spray tank one-half full with clean water and add the required amount of UP-EndUP-End HydroCap. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

#### 6. LIQUID FERTILIZERS





All of party

301 H. bg 3 1- 1

how I for a things

とかは、1.中間下 11

点 年 山上 1941年 1

R #9 5 - 1

Before mixing, always test small quantities using a simple jar test. Add the required amount of <u>UP-End\_UP-</u>

#### SPRAYING INSTRUCTIONS

#### GROUND APPLICATIONS

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area, using a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turfgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those listed. Do not apply when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. If contact occurs, rinse immediately with water to avoid staining. Do not mechanically scrub until the surface area is thoroughly rinsed. Allow treated turfgrass to dry before entering to avoid staining onto non-treated surfaces.

#### AERIAL APPLICATIONS

Apply uniformly in 5 or more gallons of water per acre. Take care to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. To avoid overlapping and possible crop injury, use a flagman or an automatic mechanical flagging unit on the aircraft.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipmentand weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Observe more stringent state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

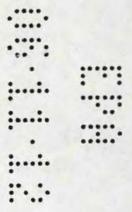
#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows
  produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower
  pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of
  increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger
  droplets than other orientations and is recommended practice. Significant deflection from the horizontal will
  reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower
  spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back
  produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT





Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### WINE

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

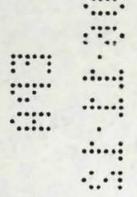
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

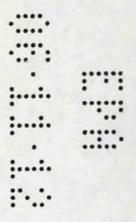




## Table 1. RESIDENTIAL , GOLF COURSE , COMMERCIAL AND OTHER NON-RESIDENTIAL TURFGRASS USES

Application Rates For Preemergence Weed Control

	fib-E	ND herbicide UP-En			
Turfgrass Species	Weeds	fl. oz.	pints	Comments	
		Product per 1,000 sq.ft.	Product per acre		
COOL SEASON G	RASSES				
Bluegrass, Kentucky Fescue, Fine Fescue, Tall Ryegrass, Perennial	Barnyardgrass	Al	Turf Uses:	Make a repeat	
	Crabgrass	1.1 to 1.6 fl oz	3.1 to 4.2 pints	application of 2.2 to 3.1	
	Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Oxalis Poa annua Prostrate Spurge Purslane	Initial application before weed germination in spring.		pints/A (0.86 to 1.1 oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass		ial and Sod Farm f Uses Only <sup>2</sup> :	Make a repeat application of 3.1	
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	pints/Acre (1.1 oz/1000	
	TOWN TO	Golf Course, Co Residenti	mmercial and Other Non- al Turf Uses Only:	sq. ft.) if the lower rate was used initially or for	
	1.1 to 2.3 oz 3.1 to 6.3 p	3.1 to 6.3 pints	extended goosegrass		
		Initial application before weed germination in		control after 5-8 weeks.	
	Corn Speedwell Cudweed Henbit Lawn Burweed Poa annual  Corn Speedwell 1.1 to 1.6 fl oz 3.1 to 4.2 pints gs			Apply in late summer	
		early fall before weed germination. Apply a repeat application of 3. to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) after 5- weeks for extended Poc annua control.			
Bentgrass or	Barnyardgrass	All Turf Uses		Make a repeat	
established Poa	Crabgrass Evening Primrose	(Non-G	reens and Tees):	application of 2.2 to 3.1	
annua <sup>3</sup> (1/2 inch		1.1 fl oz	3.1 pints	pints/Acre (0.86 to 1.1	
Foxts Hop Knot Poa c Oxali Prost	Fall Panicum Foxtail Hop Clover Knotweed Poa annua Oxalis Prostrate Spurge Purslane	spring.	perfore weed germination in	oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass	(Non-G	Il Turf Uses reens and Tees):	Apply a repeat application of 3.1	
		1.1 fl oz	3.1 pints	pts/Acre (1.1 oz/1000 s	
		Initial application before weed germination in spring.		ft.) for extended goosegrass control after 5-8 weeks.	
	Chickweed Corn Speedwell	Transfer of Co.	ll Turf Uses reens and Tees):	Apply in late summer or early fall before weed	
	Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3.1 to 4.2 pints	germination.	





	UP-E	ND herbicide UP-En	d HydroCap	
Furfgrass Species	Weeds	Weeds fl. oz. pints Comment Product per 1,000 sq.ft. Product per acre	pints	Comments
	THE REAL PROPERTY.			
WARM SEASON G	RASSES			
Bahiagrass Barnyardgrass Bermudagrass Crabgrass	Barnyardgrass Crabgrass	Residential and Sod Farm Turf Uses Only:		Make a repeat application of 2.2 to 3.1
Buffalograss	Evening Primrose	1.1 to 1.6fl oz	3.1 to 4.2 pints	pints/Acre (0.86 to 1.1
Centipedegrass Fescue, Tall	Fall Panicum Foxtail	Golf Course, Commercial and Other Non- Residential Turf Uses Only:		oz/1000 sq. ft.) after 5-8 weeks if necessary.
Paspalum,	Hop Clover	1.1 to 2.3 fl oz	3.1 to 6.3 pints	
Zoysiagrass Oxalis Prostrai	Poa annua	spring.	efore weed germination in	
	Goosegrass	All Turf Uses (Non-Greens and Tees):		An additional application of 3.1 pt/Acre (1.1
		1.1 fl oz	3.1 pints	oz/1000 sq. ft.) may be
		Apply before weed germination in spring.  Make a second application at 3.1 pints (1.1 oz/1000 sq.ft.) 5-8 weeks later.		made for extended goosegrass control 8 weeks after the second application.
	Chickweed	All Turf Uses:		Apply in late summer or
	Com Speedwell Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3,1 to 4.2 pints	early fall before weed germination. Make a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) 5-8 weeks for extended <i>Poa</i> annua control

Do not use more than 4.2 pints (2.1 quarts) per acre per application on residential and sod farm turfgrass.

Do not use more than 6.3 pints (3.1 quarts) per acre per application on golf course turfgrass, commercial or other non-residential turfgrass.

The efficacy of UP-EndUP-End HydroCap is best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-EndUP-End HydroCap is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites.

Where temporary discoloration of pavement is undesirable, Do not rub or scrub surface, but rinse area immediately using a heavy spray of water to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non-treated surfaces.

#### TURFGRASS TANK MIXES

**UP-End\_UP-End HydroCap** can be mixed with postemergence herbicides to control emerged weeds in non-residential turfgrasses. For annual grass control, applications can be made with DRIVE\* or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2-4,D and other similar products.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-EndUP-End HydroCap and follow those that are most restrictive.

## TURFGRASS RESTRICTIONS

Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.

Not for use on bentgrass or Poa annua greens or tees.



- Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application.
- On newly planted areas, do not apply until the turfgrass has filled in and has been mowed at least four times.
   Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.
- . Do not use on bentgrass or Poa annua greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for at least three (3) months following the last UP-END herbicideUP-End HydroCap application.
- Delay sprigging turfgrass for five (5) months after application.

#### LANDSCAPE AND GROUNDS MAINTENANCE

UP-EndUP-End HydroCap can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix UP-EndUP-End HydroCap with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While <a href="UP-End HydroCap">UP-End HydroCap</a> may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad-use application is made.

Refer to Table 2. Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

#### ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use UP-EndUP-End HydroCap for grounds maintenance in noncropland areas, preemergence control of the weed species listed in and around established tree plantations for site preparation, and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. UP-EndUP-End HydroCap may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land. UP-EndUP-End HydroCap can also be used in Christmas trees and non-bearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to Table 2. Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas.

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent UP-EndUP-End HvdroCap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on Instructions and Restrictions in Landscape and Ornamental Plantings before making an application.

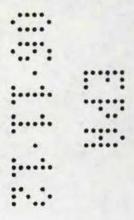
For postemergence control of weeds, use tank-mix combinations of UP EndUP-End HydroCap plus VANTAGE\*, Roundup\*, Finale\*, or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both UP-EndUP-End HydroCap and partner herbicides before use. Take care to prevent combination sprays from direct contact with desirable foliage or injury may result. UP-EndUP-End HydroCap plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict UP-EndUP-End HydroCap usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

### ORNAMENTAL BULBS

UP-EndUP-End HydroCap may be applied for control of susceptible annual weeds in ornamental bulbs listed under the Perennial Section on the label (crocus, daffodil [narcissus], gladiolus, lilies, tulip, etc.). Apply UP-EndUP-End HydroCap before, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

#### WILDFLOWERS

UP-EndUP-End HydroCap may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (\*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of UP-EndUP-End HydroCap at 4.2 pints (2.1 quarts) per acre. UP-EndUP-End HydroCap may be applied to established perennial



charles a trans

wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply UP-EndUP-End HydroCap no sooner than 4 weeks after wildflowers have emerged but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before making an application.

Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to UP-EndUP-End HydroCap may vary greatly. Test desirable species carefully to determine if area-wide applications can be made.

#### NON-BEARING FRUIT AND NUTCROPS AND VINEYARDS

UP-EndUP-End HydroCap may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Citrus Olive Pistachio Apple Fig Peach Plum Apricot Grape Pear Prune

Cherry Nectarine Pecan Walnut, English

#### NON-CROPLAND WEED CONTROL

Use UP-End herbicide UP-End HydroCap for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

#### INDUSTRIAL (UNIMPROVED) TURF

UP-EndUP-End RydroCap will provide preemergence control of the annual grasses and broadleaf weeds listed in Weed Species Controlled section of this label that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, DRIVE\*, VANTAGE\*, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

#### TOTAL VEGETATION CONTROL

UP-EndUP-End HydroCap may be tank mixed with ARSENAL\*, SAHARA\*, PLATEAU\*, VANTAGE\*, Roundup\* PRO, Karmex\*, Finale\*, Oust\*, diuron, glyphosate or other products to provide bare ground, or total vegetation control. UP-EndUP-End HydroCap can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with ARSENAL, SAHARA or PLATEAU herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For Kochia control, use a combination of **UP-End\_UP-End\_HydroCap** with ARSENAL herbicide or diuron if control has been a problem for other herbicides.

1 195 115



Lu Liste Hall

all we I had

character and the

## TABLE 2. APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS, AND OTHER NONCROP AREAS\*

For preemergence control of the weed species listed, apply UP-EndUP-End HvdroCap as follows:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 1 instructions.

For extended weed control, repeat applications of UP-End UP-End HydroCap can be made.

#### INSTRUCTIONS AND RESTRICTIONS

#### LANDSCAPE AND ORNAMENTAL PLANTINGS<sup>1</sup>

Site	Application Instructions and Restrictions
Landscape Plantings <sup>2</sup>	Do not apply to newly-transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.
	Apply as a directed or over-the-top spray.
	<ol> <li>Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.</li> </ol>
Ornamental Bulbs <sup>3</sup>	UP-EndUP-End HydroCap may be applied to bulb species listed on the label.
	Apply before, during or after bulb emergence, but not during bloom.
Wildflowers <sup>3</sup>	<ol> <li>UP-EndUP-End HydroCap may be applied in plantings of wildflowers listed on the label. Refer to specific instructions for rate and plant tolerance.</li> </ol>
	For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.

Plant only those desirable plant species listed on this label into soil treated the previous season with <u>UP-EndUP-End HydroCap</u> or injury may occur.

#### HAND-HELD SPRAY EQUIPMENT:

Use table 2 above to determine the amount of <u>UP-EndUP-End HydroCap</u> to be applied per 1000 square feet, in sufficient water for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in <u>MIXING INSTRUCTIONS</u> section of this label.

UP-EndUP-End HydroCap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any necessary cultivation must be shallow. UP-EndUP-End HydroCap may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants. A UP-EndUP-End HydroCap treatment may be followed by any registered herbicide to control weeds not listed on the UP-EndUP-End HydroCap label.

The efficacy of <u>UP-End\_UP-End HydroCap</u> will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if <u>UP-End\_UP-End HydroCap</u> is not activated by rainfall or irrigation within 30 days.

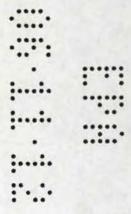
The following grass and broadleaf weeds are controlled by preemergence treatments of **UP-End-herbieide UP-End-herbieide UP-**

Bluegrass Annual

Poa annua

GRASSES	CONTR	OLLED
CHECKADOLA	COLLIN	C. Lindking

GRASSES CONTROLLED			
Common Name	Scientific Name		
Barnyardgrass Echinochloa crus-	Crowfootgrass	aegyptium	
	galli	Foxtail, Giant	Setaria faberi



<sup>&</sup>lt;sup>2</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

<sup>&</sup>lt;sup>3</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

Abutilon theophrasti

Foxtail, Green	Setaria viridis
Foxtail, Yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaltata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, Browntop	Panicum fasciculatur
Panicum, Fall	Panicum
	dichotomiflorum
Panicum, Texas	Panicum texanum
Sandbur, Field	Cenchrus incertus
Signalgrass	Brachiaria
	platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa

BROADLEAF WEEDS CONTROLLED

Scientific Name

Stellaria media

Soliva pterosperma

Mollugo verticillata

Chickweed, Mouseear	Cerastium vulgatum
Clover, Hop	Trifolium procumbens
Cudweed	Gnaphalium spp.
Evening primrose	Oenothera biennis
Fiddleneck	Amsinckia intermedia
Filaree	Erodium spp.
Henbit	Lamium amplexicaule
Knotweed, prostrate	Polygonum aviculare
Kochia	Kochia scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus spp.
Puncturevine	Tribulus terrestris
Purslane	Portulaca oleracea
Pusley, Florida	Richardia scabra
Rocket, London	Sisymbrium irio
Shepherdspurse	Capsella bursa- pastoris
Smartweed, Pennsylvania	Polygonum pensylvanicum
Speedwell, Corn	Veronica arvensis
Spurge, Annual	Euphorbia spp.
Spurge, Prostrate	Euphorbia humistrata
Woodsorrel, Yellow	Oxalis stricta

#### COMMERCIAL ORNAMENTAL PRODUCTION

Velvetleaf (Buttonweed)

#### GENERAL INFORMATION

Common Name

Burweed, Lawn

Chickweed, Common

Carpetweed

Application Use Sites: <del>UP-End UP-End HydroCap</del> can be used in and around field, liner and container ornamental production.

UP-EndUP-End HydroCap sprays may be used around and over the top of the established plants listed in Table 4 of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of UP-EndUP-End HydroCap. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

#### APPLICATION INSTRUCTIONS

UP-End UP-End HydroCap will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment, or UP-End UP-End HydroCap may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

The efficacy of **UP-EndUP-End HydroCap** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **UP-End UP-End HydroCap** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, UP-EndUP-End HydroCap or UP-EndUP-End HydroCap tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-EndUP-End HydroCap.

#### SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous





agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water.

#### INSTRUCTIONS AND RESTRICTIONS1 IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses, shadehouses or other enclosed structures.

Site	Application Instructions and Restrictions
Newly-Transplanted Field-Grown	Do not make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.
Nursery Stock <sup>2,3</sup>	<ol> <li>Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where UP-End herbicideUP-End HydroCap could come into contact with the roots.</li> </ol>
	3. DO NOT apply during bud swell, bud break or at time of first flush of new growth.
	4. Direct sprays away from graphed or budded tissue on transplants at all times.
Newly-Transplanted Container-Grown Nursery Stock <sup>2,3</sup>	<ol> <li>Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Care must be taken to ensure there are no cracks in the soil where UP EndUP-End HydroCap could come into contact with the roots.</li> </ol>
	<ol> <li>For container grown ornamentals, delay first application of the product to bareroot liners for two (2) weeks after transplanting.</li> </ol>
	3. Do not apply during bud swell, bud break or at time of first flush of new growth.
	Direct sprays away from graphed or budded tissue on transplants at all times.
Established	1. Do not apply during bud swell, bud break or at time of first flush of new growth.
Container, or Field-	2. Apply as a directed or over-the-top spray.
4. 7	3. If newly budded or graphed rootstock, make an application using a shielded sprayer.
	<ol> <li>Take care to ensure there are no cracks in the soil where UP-End UP-End HvdroCap could come into contact with the roots.</li> </ol>
Bare Ground for Container Placement	Apply to soil then water in (including mulch, gravel, wood chips, or other permeable base), replace containerized ornamentals onto pad.

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-EndUP-End HydroCap or injury may occur.

Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

## ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE\*, Roundup\*, Finale\*, Ornamec\*, Gallery\*, Princep\*, and other similar products. Do not apply sprays containing Roundup or Finale over the top of ornamental plants.

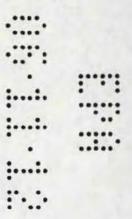
Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End herbicideUP-End HydroCap and follow those that are most restrictive.

#### CHRISTMAS TREE PLANTATIONS

UP End UP-End HydroCap may be used in and around Christmas tree plantations. UP End UP-End HydroCap may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent UP-End UP-End HydroCap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence control of weeds, use tank-mix combinations of <a href="UP-End UP-End HydroCap">UP-End HydroCap</a> plus VANTAGE, Roundup, Finale, or other labeled herbicides. Refer to approved labeling for species information. Determine rates for the tank-mix compounds from the product labels of both <a href="UP-End UP-End HydroCap">UP-End HydroCap</a> and partner herbicides before use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury

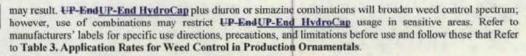


make 1 17 1

<sup>&</sup>lt;sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

<sup>&</sup>lt;sup>3</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.





#### VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

UP-EndUP-End HydroCap may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. UP-EndUP-End HydroCap may be tank mixed with VANTAGE, Roundup PRO, Karmex<sup>8,3</sup>, Finale<sup>8,4</sup>, diuron, glyphosate or other products to provide bare ground or total vegetation control, or can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Application Rates For Weed Control In Production Ornamentals.

## Table 3. APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS\*

For preemergence control of the weed species listed, apply UP End UP-End HydroCap at the following rates:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

\*For extended weed control, repeat applications of UP-End UP-End HydroCap can be made.

#### HAND-HELD SPRAY EQUIPMENT:

Use the table above to determine the amount of <u>UP-EndUP-End HydroCap</u> to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-EndUP-End HydroCap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-EndUP-End HydroCap may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A UP-EndUP-End HydroCap treatment may be followed by any registered herbicide to control weeds not listed on the UP-EndUP-End HydroCap label.

The efficacy of **UP-EndUP-End HydroCap** will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **UP-EndUP-End HydroCap** is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-EndUP-End HydroCap at the above-specified rates:

#### GRASSES CONTROLLED

Common Name	Scientific Name	
Barnyardgrass	Echinochloa crus-galli	
Bluegrass, Annual	Poa annua	
Crabgrass	Digitaria spp.	
Crowfootgrass	Dactyloctenium aegyptium	
Foxtail, Giant	Setaria faberi	
Foxtail, Green	Setaria viridis	

Foxtail, Yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaliata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, Browntop	Panicum fasciculatum
Panicum, Fall	Panicum dichotomiflorum
Panicum, Texas	Panicum texanum
Sandbur, Field	Cenchrus incertus





Signalgrass	Brachiaria platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa

## BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name	
Burweed, Lawn	Soliva pterosperma	
Carpetweed	Mollugo verticillata	
Chickweed, Common	Stellaria media	
Chickweed, Mouseear	Cerastium vulgatum	
Clover, Hop	Trifolium procumbens	
Cudweed	Gnaphalium spp.	
Eveningprimrose	Oenothera biennis	
Fiddleneck	Amsinckia intermedia	
Filaree	Erodium spp.	
Henbit	Lamium amplexicaule	
Knotweed, prostrate	Polygonum aviculare	
Kochia	Kochia scoparia	
Lambsquarters	Chenopodium album	
Pigweed	Amaranthus spp.	
Puncturevine	Tribulus terrestris	
Purslane	Portulaca oleracea	
Pusley, Florida	Richardia scabra	
Rocket, London	Sisymbrium irio	
Shepherdspurse	Capsella bursa-pastoris	
Smartweed, Pennsylvania	Polygonum pensylvanicum	
Speedwell, Corn	Veronica arvensis	
Spurge, Annual	Euphorbia spp.	
Spurge, Prostrate	Euphorbia humistrata	
Woodsorrel, Yellow	Oxalis stricta	
Velvetleaf (Buttonweed)	Abutilon theophrasti	

## Table 4. ORNAMENTAL SPECIES

tende 4. Order Marken Fred Established be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to Table 3. Application Rates For Weed Control Production Ornamentals.

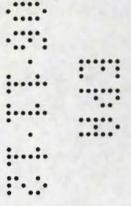
## TREES

Scientific Name
Alnus glutinosa
Malus spp.
Thuja occidentalis
Arbutus spp.
Fraxinus pennsylvanica

Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus grandidentata
Aspen, Quaking	Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra

#### TREES (continued

Common Name	Scientific Name
Buckeye, Red	Aesculus pavia
Cedar, White	Thuja occidentalis
Chamaecyparis, Boulevard	Chamaecyparis pisifera
Cherry, Black	Prunus serotina
Cherry, Choke	Prunus virginiana
Cherry, Kwanzan	Prunus serrulata
Cherry, Nanking	Prunus tomentosa
Cottonwood	Populus deltoides
Crabapple	Malus spp.
Crepe Myrtle	Lagerstroemia indica
Cryptomeria, Japanese Cedar	Cryptomeria japonica
Cypress, Bald	Taxodium distichum
Cypress, Leyland	Cupressocyparis leylandii
Dogwood, Flowering	Cornus florida
Dogwood, Korean	Cornus kousa
Dogwood, Silky	Cornus amomum
Dogwood, Shrub	Cornus spp.
Elm	Ulmus japonica
Elm, Winged	Ulmus alata
Eucalyptus (Silver-dollar) tre	e Eucalyptus cinerea
Fir, Balsam	Abies balsamae
Fir, Douglas	Pseudotsuga
	menziesii .
Fir, Fraser	Abies fraseri
Fir, White	Abies concolor
Franklinia	Franklinia spp.
Fringe tree	Chlonenthus retusus
Ginkgo	Ginkgo biloba
Gum, Black	Nyssa sylvatica
Gum, Sour	Nyssa sylvatica
Haw, Black	Viburnum prunifolium
Hawthorn	Crataegus spp.
Hemlock, Canada	Tsuga canadensis
Hemlock, Eastern	Tsuga canadensis
Holly, American	Ilex opaca
Honeylocust	Gleditsia triacanthos
Lilac, Common	Syringa vulgaris
Lilac, Japanese Tree	Syringa reticulata
Linden	Tilia spp.





Magnolia, Saucer Magnolia soulangiana Magnolia grandiflora Magnolia, Southern Magnolia, Star Magnolia stellata Maidenhair Tree Ginkgo biloba Acer platanoides Maple, Norway Maple, Japanese Acer palmatum Maple, Red Acer rubrum Maple, Sugar Acer saccharum

#### TREES (continued)

TREES (continued)	
Common Name	Scientific Name
Nannyberry, Rusty	Viburnum rufidulum
Oak, Chinquapin	Quercus muehlenbergii
Oak, Live	Quercus virginiana
Oak, Pin	Quercus palustris
Oak, Red	Quercus rubra
Oak, Swamp Chestnut	Quercus michauxii
Oak, Water	Quercus nigra
Oak, White	Quercus alba
Oak, Willow	Quercus phellos
Olive	Olea europaea
Palm, Date	Phoenix spp.
Palm, Fan	Washingtonia spp.
Palm, Pindo	Butia spp.
Palm, Washington	Washingtonia spp.
Peach	Prunus persica
Pear, Bradford	Pyrus calleryana 'Bradford'
Pecan	Carya illinoensis
Pine, Austrian	Pinus nigra
Pine, Italian Stone	Pinus pinea
Pine, Loblolly	Pinus taeda
Pine, Monterey	Pinus radiata
Pine, Red	Pinus resinosa
Pine, Scotch	Pinus sylvestris
Pine, Virginia	Pinus virginiana
Pine, White	Pinus strobus
Plum, Purple Leaf	Prunus cerasifera
Poplar, Black	Populus nigra
Redcedar, Eastern	Juniperus virginiana
Redcedar, Western	Thuja plicata
Red Ironbark	Eucalyptus sideroxylon 'Rosea
Redwood, Dawn	Metasequoia

glyptostroboides

Amelanchier laevis

Escallonia

Huonymus

Sequoiadendron

giganteum

Oxydendrum

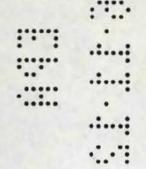
arboreum

Picea pungens

Spruce, Dwarf Alberta Picea glauca 'albertiana' Picea abies Spruce, Norway Picea glauca Spruce, White Sweetgum Liquidambar styraciflua Platanus occidentalis Sycamore Trachycarpus spp. Trachycarpus Tulip tree Liriodendron tulipifera TREES (continued) Common Name Scientific Name Walnut, Black Juglans nigra Willow, Weeping Salix babylonica Cladrastis lutea Yellowwood SHRUBS Common Name Scientific Name Abelia, Glossy Abelia grandiflora Alder, Witch Fothergilla gardenii Aucuba, Gold Aucuba japonica Azalea Rhododendron sp. Bamboo, Heavenly Nandina domestica Berberis Barberry gladwynensis Barberry, Japanese Berberis thunbergii Blue Indigo Bush Dalea gregii Bottlebrush, Lemon Callistemon citrinus Boxwood, Common Buxus sempervirens Buxus microphylla Boxwood, Japanese Brittlebush Encelia farinosa Buttonbush Cephalanthus occidentalis Camellia japonica Camellia Gardenia jasminoides Cape Jasmine Cassia artemisioides Cassia, Feathery Cordyline Cordyline spp. Correa Correa spp. Cotoneaster Cotoneaster apiculatus Cotoneaster, Bayberry Cotoneaster dammeri Cotoneaster, Rock Cotoneaster horizontalis Cupressus Cypress, Italian sempervirens Cupressocyparis Cypress, Leyland leylandii Deutzia, Slender Deutzia gracilis Dogwood, Red Twig Cornus sericea Elaeagnus Elaeagnus ebbingei

Escallonia fradesii

Euonymus fortunei



Sequoia, Giant

Serviceberry

Sourwood





Euonymus japonica
Euonymus alata
Pyracantha coccinea
Forsythia intermedia
Osmanthus fragrans
Zauschineria californica
Gardenia jasminoides
Raphiolepis indica
Hibiscus syriacus
Ilex cornuta

## SHRUBS (continued)

Common Name	Scientific Name
Holly, Japanese	Ilex crenata
Holly, Fosters	Ilex attenuata 'Fosteri'
Holly, Savannah	Ilex attenuata
Holly, Yaupon	Ilex vomitoria
Honeysuckle, Bush	Diervilla lonicera
Hopseed Bush	Dodonaea viscosa
Hopbush	Dodonaea viscosa
Hydrangea	Hydrangea macrophylla
Juniper	Juniperus sp.
Juniper, Chinese	Juniperus chinensis v. pfitzer
Juniper, Shore	Juniperus conferta
Juniper, Trailing	Juniperus horizontalis
Laurel, Cherry	Prunus laurocerasus
Laurel, Mountain	Kalmia latifolia
Laurel, Otto Luyken	Prunus laurocerasus
Laurel, Schipka	Prunus schipkanensis
Laurustinus	Viburnum tinus
Lavender, English	Lavandula angustifolia
Leucothoe	Leucothoe
	fontanesiana
Leucothoe, Coast	Leucothoe axillaris
Lilac, Cut-leaf	Syringa laciniata
Lily-of-the-Nile	Agapanthus africanus
Mahonia	Mahonia aquifolium
Mock Orange	Pittosporum tobira
Myrtle, Compact	Myrtus communis
Myrtle, Wax	Myrica cerifera
Nandina	Nandina domestica
Oleander	Nerium oleander
Oregon Grape	Mahonia aquifolium
Osmanthus	Osmanthus fragrans
Palm, European Fan	Chamaerops humilis
Palm, Mediterranean Fan	Chamaerops spp.
Phlox, Prickly	Leptodactylon californicum

Photinia, Fraser	Photinia x Fraseri
Pieris, Japanese	Pieris japonica
Pine, Mugo	Pinus mugo
Plum, Natal	Carissa grandiflora
Privet, California	Ligustrum ovalifolium
Privet, Glossy	Ligustrum lucidum
Privet, Variegated	Ligustrum sinensis
Privet, Waxleaf	Ligustrum japonicum
Pyracantha	Pyracantha coccinea
Quince, Flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens

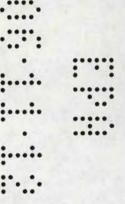
## SHRUBS (continued)

Common Name	Scientific Name
Redroot	Ceanothus spp.
Rhododendron	Rhododendron spp.
Robira	Pittosporum tobira
Rose	Rosa spp.
Spice Plant	Illicium parviflorum
Spiraea	Spiraea vanhouttei
Spiraea, Anthony Waterer	Spiraea X bumalda
Spiraea, Japanese	Spiraea japonica
Sweet Bay	Laurus nobilis
Trumpet Bush	Tecoma stans
Verbena, Lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild Lilac	Ceanothus spp.
Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern*	Podocarpus macrophyllus
Yucca, Adam's Needle	Yucca filamentosa
Yucca, Weeping	Yucca pendula

\* Do not apply UP-End herbicide UP-End
HydroCap during spring growth or injury to
terminals may occur.

## GROUND COVERS

Common Name	Scientific Name
Ajuga	Ajuga reptans
Baby Sun Rose	Aptenia cordifolia
Beach Strawberry	Fragaria chiloensis
Capeweed	Arctotheca calendula
Cinquefoil, Spring	Potentilla verna
Coyotebrush, Dwarf	Baccharis pitularis



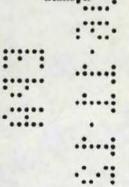
Daisy, Trailing African	Osteospermum fruticosum
Dymondia	Dymondia margaretae
Gazania	Gazania splendens
Iceplant, Large Leaf	Carpobrotus edulis
Ivy, English	Hedera helix
Ivy, Geranium	Pelargonium peltatum
Jasmine, Asiatic	Trachelospermum asiaticum
Jasmine, Primrose	Jasminum mesnyi
Jessamine, Carolina	Gelsemium sempervirens
Manzanita, Bearberry	Arctostaphylos uva-ursi

## GROUND COVERS (continued)

Common Name	Scientific Name
Miscanthus	Miscanthus spp.
Mondograss	Ophiopogon japonica
Morning glory	Convolvulus spp.
Myoporum	Myoporum parviflolium
Pachysandra	Pachysandra terminalis
Potentilla	Potentilla fruticosa
Red Apple	Aptenia cordifolia
Rosemary	Rosemarinus officinalis
Rose-Of-Sharon	Hypericum calycinum
Sand Strawberry	Fragaria chiloensis
Sedum	Sedum spurium
St. Johnswort, Creeping	Hypericum calycinum
Stonecrop	Sedum spurium
Verbena, Peruvian	Verbena peruviana
Vervain	Verbena peruviana
Vetch, Crown	Vicia sativa
Vinca	Vinca minor
Wintercreeper	Euonymous fortunei

## PERENNIALS

Common Name	Scientific Name
Common Name	Scientific (vame
Acacia	Acacia redolens
Asparagus	Asparagus spp.
Aster, New York	Aster novi-belgii
Aster, Stokes	Stokesia laevis
Astilibe (False Spirea)	Astilibe spp.
Avens	Geum triflorum
Baby's Breath	Gypsophila elegans
Baby's Breath	Gypsophila paniculata
Beard-Tongue	Penstemon spp.
Bellflower	Campanula spp.
2022	



Bellflower, Willow	Campanula persicifolia
Bird of Paradise	Caesalpinia pulcherrima
Black-eyed Susan†	Rudbeckia hirta
Blanket Flower†	Gaillardia aristata
Blanket Flower†	Gaillardia x grandiflora
Bleeding Heart	Dicentra spectabilis
Butterfly Weed	Asclepias tuberosa
California Poppy	Eschscholzia california
Calla Lily	Zantedeschia aethiopica
Canna, Common Garden	Canna generalis 'Lucifer'

PERENNIALS (continued)	
Common Name	Scientific Name
Carex	Carex spp.
Chincherinchee	Ornithogalum thyrsoides
Clover, Crimson†	Trifolium incarnatum
Columbine	Aquilegia 'McKana Giant'
Columbine	Aquilegia x hybrida
Coreopsis (tickseed)†	Coreopsis lanceolata
Crinum Lily	Crinum spp.
Crocus	Crocus spp.
Daffodil	Narcissus spp.
Daylily	Hemerocallis spp.
Fairy Duster	Calliandra eriophylla
Fern, Asparagus	Asparagus officinalis
Fern, Boston	Nephrolepis exaltata
Fern, Hay-scented	Dennstaedtia punctilobula
Fern, Leatherleaf*	Rumohra adiantiformis
Fortnight Lily	Moraea spp.
Foxglove	Digitalis purpurea
Freesia	Freesia x hybrida
Gaillardia	Gaillardia pulchella
Geum	Geum spp.
Gladiolus	Gladiolus spp.
Heather, Dwarf	Calluna vulgaris
Hosta	Hosta spp.
Indian Blanket†	Gaillardia pulchella
Iris, Japanese	Iris kaemphera
Lantana, Weeping	Lantana montevidensis
Leopards Bane	Doronicum cordatum
Lily	Lillium spp.
Liriope, Big Blue	Liriope muscari
The state of the s	





Liriope, Creeping	Liriope spicata
Liriope, Variegated	Liriope muscari
Moonbeam	Coreopsis verticillata
Montbretia	Crocosmia crocosmiiflora
Mugwort, Western	Artemesia ludoviciana
Nightshade	Solanum spp.
Orchid, Peacock	Acidanthera bicolor
Oxeye Daisy†	Chrysanthemum leucanthemum
Palm, Areca	Chysalidocarpus lutescens
Palm, Pygmy Date	Phoenix roebelence
Palm, Washington	Washington robusta
Peony, Chinese	Paeonia lactiflora
Purple Coneflower	Echinacea purpurea

## PERENNIALS (continued)

Common Name	Scientific Name
Purple Gay-feather	Liatris pycnostachys
Purple Loosestrife	Lythrum virgatum
Rodgersia	Rodgersia henricie
Rosemary	Rosmarinus officinalis
Sedge	Carex spp.
Shasta Daisy†	Chrysanthemum x superbum
Statice	Limonium latifolia
Statice, German	Goniolimon tartaricum
Sweet Flag	Acorus calamus
Tickseed†	Coreopsis lanceolata
Texas Bluebonnet	Lupinus texenis
Tulip	Tulipa spp.
Wonder Flower	Ornithogalum thyrsoides
Yarrowt	Achillea millefolium
Zephyr Lily	Zephyranthes spp.

- \* Applications of UP-End herbicideUP-End HydroCap to immature ferns (during periods of new growth of fronds) may result in some injury.
- † These plants have shown tolerance to UP-EndUP-End HydroCap applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed

## ORNAMENTAL GRASSES

Common Name	Scientific Name
Beach Grass	Ammophila breviligulata
Fescue, Blue	Festuca glauca
Fescue, Sheep	Festuca ovina

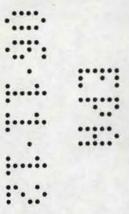
Fountain Grass	Pennisetum setaceum
Pampas Grass	Cortaderia selloana
Reed Canary Grass	Phalaris arundinacea
Reed, Giant	Arundo spp.
Ribbon Grass	Phalaris arundinacea
Tufted Hair Grass	Deschampsia caespitosa

## BEDDING PLANTS

Common Name	Scientific Name
Ageratum	Ageratum houstonianum
Alyssum*	Alyssum saxatile
Anemone, Poppy-flowered	Anemone coronaria
Artemesia	Artemesia spp.
Balloonflower	Platycodon grandiflorum
Begonia*	Begonia spp.
Cabbage, Ornamental	Brassica olereacea

Common Name	Scientific Name
Caladium	Caladium spp.
Cast-Iron Plant	Aspidistra elatior
China Aster*	Callistephus chinensis
Crocosmia, Montebretia	Crocosmia x crocosmiiflora
Dahlia*	Dahlia spp.
Dianthus	Dianthus barbatus
Dusty Miller	Senecio cineraria
Gayfeather	Liatris spp.
Gazania, Treasure Flower	Gazania rigens
Gazania, Trailing	Gazania rigens leucolaena
Gloxinia	Gloxinia simningia
Kale, Ornamental	Brassica napus
Marigold, African	Tagetes erecta
Moss Rose*	Portulaca grandiflora
Mum, Garden	Chrysanthemum spp.
Periwinkle*	Vinca major
Periwinkle, Rose	Catharanthus roseus
Petunia*	Petunia spp.
Plumosa Cockscomb	Celosia cristata
Portulaca*	Portulaca grandiflora
Salvia*	Salvia splendens
Snapdragon	Antirrhinum majus
Statice*	Limonium spp.
Sweet William	Dianthus barbatus
Vinca*	Vinca major

<sup>\*</sup> Do not apply UP-EndUP-End HvdroCap sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.





UP-End herbicide UP-End HydroCap may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of such plants at the specified rate, Evaluate treated plants 1-2 months following treatment for possible injury.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: DO NOT STORE BELOW 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse after emptying, then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Containers less than or equal to 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Containers larger than 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on it end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

#### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

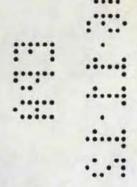
The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

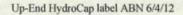
TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

DRIVE, ARSENAL, SAHARA, PLATEAU and VANTAGE are registered trademarks of BASF Corporation.







The second of the second of the

Roundup and Roundup PRO are registered trademarks of Monsanto Company.

Karmex and Oust are registered trademarks of E. I. duPont de Nemours and Company.

Finale is a registered trademark of Bayer AG.

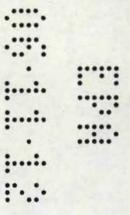
Ornamec and Trimec are registered trademarks of PBI Gordon Corp.

Three Way is a registered trademark of Lesco Technologies, LLC.

Gallery is a registered trademark of Dow AgroSciences.

Princep is a registered trademark of Syngenta.

Rev. 6/4/12





# UP United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax)

Rebecca A. Clemmer Regulatory Manager

June 4, 2012

Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

Pendi Hydrocap Herbicide (EPA Reg. No. 70506-230)

Notification of Alternate Brand Name

Dear Mr. Davis:

United Phosphorus, Inc. is notifying the Agency of the use of an alternate brand name for the product Pendi Hydrocap Herbicide. The alternate name is <u>UP-End HydroCap herbicide</u>. We are also removing reference to the website from the label and adding the resistance group information.

In support of this action, enclosed please find: a marked copy of the label; clean copy of the label; and EPA form 8570-1.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

Regulatory Manager

5. Date

June 4, 2012

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

lommer

4. Typed Name

Rebecca A. Clemmer

White - EPA File Copy (Original)

Yellow - Applicant Copy



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Rebecca A. Clemmer United Phosphorus, Inc. 630 Freedom Business Center Suite 402 King of Prussia, PA 19406

FEB 7 2012

Subject:

Product Name: Up-End Herbicide

New Product Name: Pendi Hydrocap

EPA Reg. No. 70506-230

Label Notification per PRN 98-10 Application Dated: January 31, 2012

Dear Ms. Clemmer,

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for Up-End Herbicide (EPA Reg. No. 70506-230) dated January 31, 2011. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please contact Emily Hartman of my staff at (703) 347-0189 or hartman.emily@epa.gov.

Sincerely,

Kable Bo Davis, Product Manager 25

Herbicide Branch Registration Division

Office of Pesticide Programs



## P United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax)

Rebecca A. Clemmer Regulatory Manager

Jan. 31, 2012

Bo Kable Davis (PM 25)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re: Notification

UP-End Herbicide (EPA Reg. No. 70506-230)

Dear Mr. Davis:

United Phosphorus, Inc. is notifying the Agency of a new primary brand name for the subject product: Pendi Hydrocap. This notification changes the product name throughout the label, and also adds the resistance category box at the top of the main panel.

In support of this Notification, enclosed please find:

- one copy of the marked label
- one clean copy of the label
- EPA form 8570-1

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

R.a. Clemmer

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

Form Approved, OMB No. 2070-0060, Approval expires 5-31-98



**United States** 

L	9	101	uc	LLI	011
Ar	ne	n	dn	ne	nt

ADD	Identifier	Mumhar
OFF	identillet	Mullipel

<b>VEFA</b>	Environmental	Protection	n Agency	X Othe	r		
	Washing	ton, DC 2046	0	A Othe	1		
	App	olication fo	r Pesticide - Secti	on I			
Company/Product Number 70506-230			EPA Product I     B. Davis	Manager	3. Pro	posed Cl	assification
<ol> <li>Company/Product (Name) United Phosphorus, Inc/Pend</li> </ol>			PM # 25		x	None	Restricted
5. Name and Address of App United Phosphorus, Inc. 630 Freedom Business Cente King of Prussia, PA 19406	licant (Include ZIP Code)		6. Expedited Re (b)(i), my product to: EPA Reg No.				
Check if this is a new ac	ddress		Product Name	-			
		S	ection - II				
Amendment - Explain b	elow			ed labels in r	response to		
				tter dated	**************************************		
Resubmission in respon	se to Agency letter dated			Application	NO.	TIFICA	NOITA
X Notification – Explain be	elow		Other - Ex	xplain below	F	EB -7	2012
to the labeling or the confidentials statement to EPA. I furt product may be in violation of	her understand that if this	notification is ject to enforce	not consistent with the to ment action and penaltie	erms of PR N	Notice 98-10 a	nd 40 CF	R 152.46, this
		S	Section III				
Material This Product Will     Child-Resistant Packaging     Yes	Unit Packaging Yes		Water Soluble Packag Yes	ing	2. T	ype of Cor Metal Plastic	ntainer
No	No		No			Glass	
*Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per contain		Paper Other (Sp	pecify)
3. Location of Net Contents I	nformation Container	4. Size(s) I	Retail Container		5. Location o On Labe	el	ections anying product
6. Manner in Which Label is	Affixed to Product	Lithog Paper Stend	glued	Othe	er		
		S	Section IV			111111	
1. Contact Person (Complete	items directly below for it			ed, if necess	ary, to proces	s this appl	lication.)
Name		Title			Telephone No		
Rebecca A. Clemmer Reg			atory Manager		610-491-2828		
I certify that the statements I h I acknowledge that any knowin both under applicable law	ave made on this form and					CONT. ASSESSMENT	Application eived
2. Signature		3. Titl	e				(Stamped)
R.a.Clem	wer	10 PR 10 IUN 1975	atory Manager				••
4. Typed Name		5. Dat	te		::	:	
Rebecca A. Clemmer		Jan. 3	1, 2012				

Yellow Applicant Copy

White – EPA File Copy (Original)



GROUP

3

HERBICIDE

Formatted: Font: 14 pt

## UP-EndPendi Hydrocap™

## Herbicide

For Preemergent Weed Control in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT	
pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2, 6-dinitrobenzenamine	38.7%
OTHER INGREDIENTS:	61.3%
TOTAL	100.0%
(1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous car	rier.)

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.     Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.     Call a poison control center or doctor for treatment advice.
------------	---

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



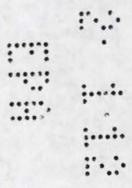
United Phosphorus, Inc 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406

1-800-247-1557 • www.upi-usa.com

EPA Reg. No. 70506-230 EPA Est. No.

Net Contents: gallons

MOTIFICATION FEB -7 2012





## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### Personal Protective Equipment (PPE):

Some materials that are chemically resistant to these products are listed below. For more options, refer to Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

Follow manufacturer's instruction for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

Users should:

- · Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- · Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as
  possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

Do not apply this product through any type of irrigation system.

UPI does not authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

Do not apply UP-END herbicide Pendi Hydrocap in greenhouses, shadehouses or other enclosed structures.

Not for use for commercial seed production.



### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- · Coveralls
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

#### MODE OF ACTION

UP EndPendi Hvdrocap is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

#### PRODUCT INFORMATION

APPLICATION USE SITES – for preemergence control of grasses and certain broadleaf weed species as they germinate.

Turfgrass sites (golf course, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas, such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.

Bulb plantings, non-bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants.

In and around field, liner and container ornamental production.



#### APPLICATION INSTRUCTIONS

UP-EndPendi Hydrocap will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use UP-EndPendi Hydrocap together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of UP-EndPendi Hydrocap will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-EndPendi Hydrocap is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, UP-EndPendi Hydrocap or UP-EndPendi Hydrocap tank-mix combinations will not cause crop injury. Over-application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-EndPendi Hydrocap.

#### MIXING INSTRUCTIONS

UP-EndPendi Hydrocap may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to UP-EndPendi Hydrocap alone.

When using tank mixtures or sequential applications with UP-EndPendi Hvdrocap, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

#### Mixing Instructions

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing UP-EndPendi Hydrocap
or UP-EndPendi Hydrocap tank mixtures in liquid fertilizer, refer to appropriate label sections for
recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

#### 2. UP-EndPendi Hydrocar

When using UP EndPendi Hydrocap alone, add UP EndPendi Hydrocap to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

## 3. UP-EndPendi Hydrocap Tank Mixes

Add the tank mixture ingredients in the order listed below before adding UP-EndPendi Hydrocap:

- (a) Wettable Powder (WP) formulations make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations add the F formulation to the partially filled tank while agitating.
- (d) Add UP-EndPendi Hydrocap to the partially filled tank while agitating.
- (e) Water Soluble Concentrate (WSC) formulations add the WSC formulation to the partially filled tank while agitating.
- (f) Emulsifiable Concentrate (EC) formulations add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

#### 5. BACKPACK SPRAYER

Begin with a clean spray tank. Fill the spray tank one-half full with clean water and add the required amount of LP-EndPendi Hydrocap. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

#### 6. LIQUID FERTILIZERS



Before mixing, always test small quantities using a simple jar test. Add the required amount of **UP-EndPendi Hvdrocap** to a half filled spray tank while agitating; then add the fertilizer product. Complete filling spray tank to desired level.

#### SPRAYING INSTRUCTIONS

#### GROUND APPLICATIONS

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area, using a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turfgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those listed. Do not apply when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. If contact occurs, rinse immediately with water to avoid staining. Do not mechanically scrub until the surface area is thoroughly rinsed. Allow treated turfgrass to dry before entering to avoid staining onto non-treated surfaces.

#### AERIAL APPLICATIONS

Apply uniformly in 5 or more gallons of water per acre. Take care to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. To avoid overlapping and possible crop injury, use a flagman or an automatic mechanical flagging unit on the aircraft.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipmentand weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Observe more stringent state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

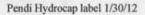
#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows
  produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower
  pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of
  increasing pressure.
- · Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger
  droplets than other orientations and is recommended practice. Significant deflection from the horizontal will
  reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower
  spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back
  produce the largest droplets and the lowest drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT





Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### WINI

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).



## Table 1. RESIDENTIAL , GOLF COURSE , COMMERCIAL AND OTHER NON-RESIDENTIAL TURFGRASS USES

Application Rates For Preemergence Weed Control

Turfgrass Species	Weeds	END herbicidePendi	pints	Comments	
A CONTRACTOR OF THE CONTRACTOR		Product per 1,000 sq.ft.	Product per acre	Commens	
COOL SEASON G	RASSES				
Bluegrass, Kentucky	Barnyardgrass	All Turf Uses:  1.1 to 1.6 fl oz 3.1 to 4.2 pints Initial application before weed germination in		Make a repeat	
Fescue, Fine Fescue, Tall	Crabgrass			application of 2.2 to 3.1	
Ryegrass, Perennial	Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Oxalis Poa annua Prostrate Spurge Purslane	Initial application b spring.	efore weed germination in	pints/A (0.86 to 1.1 oz/1000 sq ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass		ial and Sod Farm	Make a repeat application of 3.1	
		1.1 to 1.6 fl oz	f Uses Only <sup>2</sup> :  3.1 to 4.2 pints	pints/Acre (1.1 oz/1000	
		Golf Course, Co	mmercial and Other Non- al Turf Uses Only:	sq. ft.) if the lower rate was used initially or for	
		1.1 to 2.3 oz	3.1 to 6.3 pints	extended goosegrass	
		Initial application b	efore weed germination in	control after 5-8 weeks.	
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annual		Turf Uses:	Apply in late summer or early fall before weed germination. Apply a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) after 5- weeks for extended Poal annua control.	
		1.1 to 1.6 fl oz	3.1 to 4.2 pints		
Bentgrass or	Barnyardgrass Crabgrass Evening Primrose	All Turf Uses		Make a repeat	
established Poa			reens and Tees):	application of 2.2 to 3.	
annua <sup>3</sup> (1/2 inch height or taller)	Fall Panicum Foxtail Hop Clover Knotweed Poa annua Oxalis Prostrate Spurge Purslane	1.1 fl oz 3.1 pints Initial application before weed germination in spring.		pints/Acre (0.86 to 1.1 oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass	All Turf Uses (Non-Greens and Tees):		Apply a repeat application of 3.1	
		1.1 fl oz	3.1 pints	pts/Acre (1.1 oz/1000 sq	
			perfore weed germination in	ft.) for extended goosegrass control after 5-8 weeks.	
	Chickweed Corn Speedwell		Il Turf Uses (reens and Tees):	Apply in late summer or early fall before weed	
	Cudweed Henbit Lawn Burweed	1.1 to 1.6 fl oz	3.1 to 4.2 pints	germination.	



	UP	END herbieidePendi	Hydrocap <sup>1</sup>		
Turfgrass Species	Weeds	fl. oz.	pints	Comments	
		Product per 1,000 sq.ft.	Product per acre		
WARM SEASON G	RASSES				
Bahiagrass Bermudagrass	Barnyardgrass Crabgrass	Residential and Sod Farm Turf Uses Only:		Make a repeat application of 2,2 to 3.1	
Buffalograss	Evening Primrose	1.1 to 1.6fl oz	3.1 to 4.2 pints	pints/Acre (0.86 to 1.1	
Centipedegrass Fescue, Tall	Fall Panicum Foxtail	Golf Course, Commercial and Other Non- Residential Turf Uses Only:		oz/1000 sq. ft.) after 5-8 weeks if necessary.	
Paspalum,	Hop Clover	1.1 to 2.3 fl oz	3.1 to 6.3 pints		
seashore St. Augustinegrass Zoysiagrass	Knotweed Poa annua Oxalis Prostrate Spurge Purslane	Initial application before weed germination in spring.			
	Goosegrass	All Turf Uses (Non-Greens and Tees):		An additional application of 3.1 pt/Acre (1.1	
		1.1 fl oz	3.1 pints	oz/1000 sq. ft.) may be	
		Apply before weed germination in spring.		made for extended	
			lication at 3.1 pints (1.1	goosegrass control 8 weeks after the second application.	
	Chickweed	All Turf Uses:		Apply in late summer or	
	Corn Speedwell Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3.1 to 4.2 pints	Apply in late summer of early fall before weed germination. Make a repeat application of 3. to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) 5-8 weeks for extended Pocamusa control.	

Do not use more than 4.2 pints (2.1 quarts) <u>per acre per application</u> on residential and sod farm turfgrass. Do not use more than 6.3 pints (3.1 quarts) <u>per acre per application</u> on golf course turfgrass, commercial or other non-residential turfgrass.

The efficacy of UP-EndPendi Hydrocap is best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-EndPendi Hydrocap is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is undesirable, <u>Do not rub or scrub surface, but rinse area immediately using a heavy spray of water</u> to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non-treated surfaces.

## TURFGRASS TANK MIXES

UP-EndPendi Hydrocap can be mixed with postemergence herbicides to control emerged weeds in non-residential turfgrasses. For annual grass control, applications can be made with DRIVE\* or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2-4,D and other similar products.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-EndPendi Hydrocap and follow those that are most restrictive.

#### TURFGRASS RESTRICTIONS

 Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application.

Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.

<sup>3</sup> Not for use on bentgrass or Poa annua greens or tees.



- On newly planted areas, do not apply until the turfgrass has filled in and has been mowed at least four times.
   Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.
- Do not use on bentgrass or Poa annua greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for at least three (3) months following the last UP-END herbicidePendi Hydrocap application.
- Delay sprigging turfgrass for five (5) months after application.

#### LANDSCAPE AND GROUNDS MAINTENANCE

UP-EndPendi Hydrocap can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix UP-EndPendi Hydrocap with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While UP-EndPendi Hydrocap may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad-use application is made.

Refer to Table 2. Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

## ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use UP-EndPendi Hydrocap for grounds maintenance in noncropland areas, preemergence control of the weed species listed in and around established tree plantations for site preparation, and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. UP-EndPendi Hydrocap may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land. UP-EndPendi Hydrocap can also be used in Christmas trees and non-bearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations, Refer to Table 2. Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas.

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent UP EndPendi Hydrocap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on Instructions and Restrictions in Landscape and Ornamental Plantings before making an application.

For postemergence control of weeds, use tank-mix combinations of **UP-EndPendi Hydrocap** plus VANTAGE\*, Roundup\*, Finale\*, or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both **UP-EndPendi Hydrocap** and partner herbicides before use. Take care to prevent combination sprays from direct contact with desirable foliage or injury may result. **UP-EndPendi Hydrocap** plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict **UP-EndPendi Hydrocap** usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

#### ORNAMENTAL BULBS

UP-EndPendi Hydrocap may be applied for control of susceptible annual weeds in ornamental bulbs listed under the Perennial Section on the label (crocus, daffodil [narcissus], gladiolus, lilies, tulip, etc.). Apply UP-EndPendi Hydrocap before, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

#### WILDFLOWERS

UP-EndPendi Hydrocap may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (\*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of UP-EndPendi Hydrocap at 4.2 pints (2.1 quarts) per acre. UP-EndPendi Hydrocap may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply UP-EndPendi Hydrocap no sooner than 4 weeks after wildflowers have emerged but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before making an application.



Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to UP-EndPendi Hydrocap may vary greatly. Test desirable species carefully to determine if area-wide applications can be made.

#### NON-BEARING FRUIT AND NUTCROPS AND VINEYARDS

<u>UP-EndPendi Hvdrocap</u> may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Citrus Olive Pistachio
Apple Fig Peach Plum
Apricot Grape Pear Prune
Cherry Nectarine Pecan Walnut, English

#### NON-CROPLAND WEED CONTROL

Use UP-End herbicidePendi Hydrocap for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

## INDUSTRIAL (UNIMPROVED) TURF

UP-EndPendi Hydrocap will provide preemergence control of the annual grasses and broadleaf weeds listed in Weed Species Controlled section of this label that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, DRIVE\*, VANTAGE\*, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

#### TOTAL VEGETATION CONTROL

UP-EndPendi Hydrocap may be tank mixed with ARSENAL\*, SAHARA\*, PLATEAU\*, VANTAGE\*, Roundup\* PRO, Karmex\*, Finale\*, Oust\*, diuron, glyphosate or other products to provide bare ground, or total vegetation control. UP-EndPendi Hydrocap can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with ARSENAL, SAHARA or PLATEAU herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For Kochia control, use a combination of <a href="https://example.com/en-line-new-normal-left-



## TABLE 2. APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS, AND OTHER NONCROP AREAS\*

For preemergence control of the weed species listed, apply UP-EndPendi Hydrocap as follows:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 1 instructions.

For extended weed control, repeat applications of UP-EndPendi Hydrocap can be made.

#### INSTRUCTIONS AND RESTRICTIONS

### LANDSCAPE AND ORNAMENTAL PLANTINGS<sup>1</sup>

Site	Application Instructions and Restrictions		
Landscape Plantings <sup>2</sup>	Do not apply to newly-transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.		
	Apply as a directed or over-the-top spray.		
	<ol> <li>Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.</li> </ol>		
Ornamental Bulbs <sup>3</sup>	UP-EndPendi Hydrocap may be applied to bulb species listed on the label.		
	2. Apply before, during or after bulb emergence, but not during bloom.		
Wildflowers <sup>3</sup>	UP EndPendi Hydrocap may be applied in plantings of wildflowers listed on the label. Refer to specific instructions for rate and plant tolerance.		
	<ol> <li>For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.</li> </ol>		

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-EndPendi Hydrocap or injury may occur.

#### HAND-HELD SPRAY EQUIPMENT:

Use table 2 above to determine the amount of <a href="UP-EndPendi Hydrocap">UP-EndPendi Hydrocap</a> to be applied per 1000 square feet, in sufficient water for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-EndPendi Hvdrocap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any necessary cultivation must be shallow. UP-EndPendi Hvdrocap may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants. A UP-EndPendi Hvdrocap treatment may be followed by any registered herbicide to control weeds not listed on the UP-EndPendi Hvdrocap label.

The efficacy of **UP-EndPendi Hydrocap** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **UP-EndPendi Hydrocap** is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End herbicidePendi Hydrocap at the above-specified rates:

GRASSES CONTROL	LED	Bluegrass, Annual	Poa annua	
Common Name Scientific Name		Crabgrass	Digitaria spp.  Dactyloctenium	
Barnyardgrass	Echinochloa crus-	Crowfootgrass	aegyptium	
	galli	Foxtail, Giant	Setaria faberi	

<sup>&</sup>lt;sup>2</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

<sup>&</sup>lt;sup>3</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.



Foxtail, Green	Setaria viridis	Chickweed, Mouseear	Cerastium vulgatum
Foxtail, Yellow	Setaria glauca	Clover, Hop	Trifolium procumbens
Goosegrass	Eleusine indica	Cudweed	Gnaphalium spp.
Itchgrass	Rottboellia exaltata	Evening primrose	Oenothera biennis
Johnsongrass (from seed)	Sorghum halepense	Fiddleneck	Amsinckia intermedia
Junglerice	Echinochloa colona	Filaree	Erodium spp.
Lovegrass (from seed)	Eragrostis spp.	Henbit	Lamium amplexicaule
Panicum, Browntop	Panicum fasciculatum	Knotweed, prostrate	Polygonum aviculare
Panicum, Fall	Panicum	Kochia	Kochia scoparia
	dichotomiflorum	Lambsquarters	Chenopodium album
Panicum, Texas	Panicum texanum	Pigweed	Amaranthus spp.
Sandbur, Field	Cenchrus incertus	Puncturevine	Tribulus terrestris
Signalgrass	Brachiaria	Purslane	Portulaca oleracea
	platyphylla	Pusley, Florida	Richardia scabra
Sprangletop, Mexican	Leptochloa uninervia	Rocket, London	Sisymbrium irio
Sprangletop, Red	Leptochloa filiformis	Shepherdspurse	Capsella bursa-
Witchgrass	Panicum capillare		pastoris
Woolly Cupgrass	Eriochloa villosa	Smartweed, Pennsylvania	Polygonum
BROADLEAF WEEDS C	ONTROLLED	6 1 11 6	pensylvanicum
Common Name	Scientific Name	Speedwell, Corn	Veronica arvensis
Burweed, Lawn	Soliva pterosperma	Spurge, Annual	Euphorbia spp.
Carpetweed	Mollugo verticillata	Spurge, Prostrate	Euphorbia humistrata
Chickweed, Common	Stellaria media	Woodsorrel, Yellow	Oxalis stricta
Chickweed, Common	Sienaria media	Velvetleaf (Buttonweed)	Abutilon theophrasti

#### COMMERCIAL ORNAMENTAL PRODUCTION

#### GENERAL INFORMATION

Application Use Sites: UP-EndPendi Hydrocap can be used in and around field, liner and container ornamental production.

**UP-EndPendi Hydrocap** sprays may be used around and over the top of the established plants listed in **Table 4** of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of **UP-EndPendi Hydrocap**. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

#### APPLICATION INSTRUCTIONS

UP EndPendi Hydrocap will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment, or UP EndPendi Hydrocap may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

The efficacy of UP-EndPendi Hydrocap will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-EndPendi Hydrocap is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, UP-EndPendi Hydrocap or UP-EndPendi Hydrocap tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-EndPendi Hydrocap.

#### SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous



agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water

#### INSTRUCTIONS AND RESTRICTIONS1 IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses, shadehouses or other enclosed structures.

Site	Application Instructions and Restrictions
Newly-Transplanted Field-Grown	<ol> <li>Do not make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.</li> </ol>
Nursery Stock <sup>2,3</sup>	<ol> <li>Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where UP-End herbicidePendi Hydrocap could come into contact with the roots.</li> </ol>
	3. DO NOT apply during bud swell, bud break or at time of first flush of new growth.
	Direct sprays away from graphed or budded tissue on transplants at all times.
Newly-Transplanted Container-Grown Nursery Stock <sup>2,3</sup>	Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Care must be taken to ensure there are no cracks in the soil where UP-EndPendi Hydrocap could come into contact with the roots.
	For container grown ornamentals, delay first application of the product to bareroot liners for two     (2) weeks after transplanting.
	3. Do not apply during bud swell, bud break or at time of first flush of new growth.
	4. Direct sprays away from graphed or budded tissue on transplants at all times.
Established	1. Do not apply during bud swell, bud break or at time of first flush of new growth.
Container, or Field-	2. Apply as a directed or over-the-top spray.
Grown Nursery Stock <sup>2, 3</sup>	3. If newly budded or graphed rootstock, make an application using a shielded sprayer.
Sioca	<ol> <li>Take care to ensure there are no cracks in the soil where UP EndPendi Hydrocap could come into contact with the roots.</li> </ol>
Bare Ground for Container Placement	Apply to soil then water in (including mulch, gravel, wood chips, or other permeable base), replace containerized ornamentals onto pad.

Plant only those desirable plant species listed on this label into soil treated the previous season with <u>UP-EndPendi Hydrocap</u> or injury may occur.

Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE\*, Roundup\*, Finale\*, Ornamec\*, Gallery\*, Princep\*, and other similar products. Do not apply sprays containing Roundup or Finale over the top of ornamental plants.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End herbicidePendi Hydrocap and follow those that are most restrictive.

#### CHRISTMAS TREE PLANTATIONS

UP EndPendi Hydrocap may be used in and around Christmas tree plantations. UP EndPendi Hydrocap may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent UP-EndPendi Hydrocap from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence control of weeds, use tank-mix combinations of <a href="UP-EndPendi Hydrocap">UP-EndPendi Hydrocap</a> plus VANTAGE, Roundup, Finale, or other labeled herbicides. Refer to approved labeling for species information. Determine rates for the tank-mix compounds from the product labels of both <a href="UP-EndPendi Hydrocap">UP-EndPendi Hydrocap</a> and partner herbicides before use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury

<sup>&</sup>lt;sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

<sup>&</sup>lt;sup>3</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.



Setaria glauca Eloudes india

may result. UP-EndPendi Hydrocap plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict UP-EndPendi Hvdrocap usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

UP-EndPendi Hydrocap may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. UP-EndPendi Hydrocap may be tank mixed with VANTAGE, Roundup PRO, Karmex\*3, Finale\*4, diuron, glyphosate or other products to provide bare ground or total vegetation control, or can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Application Rates For Weed Control In Production Ornamentals.

#### Table 3. APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS\*

For preemergence control of the weed species listed, apply UP-EndPendi Hydrocap at the following rates:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

\*For extended weed control, repeat applications of UP-EndPendi Hydrocap can be made.

#### HAND-HELD SPRAY EQUIPMENT:

Use the table above to determine the amount of UP-EndPendi Hydrocap to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-EndPendi Hydrocap will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-EndPendi Hydrocap may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A UP-EndPendi Hydrocap treatment may be followed by any registered herbicide to control weeds not listed on the UP-EndPendi Hydrocap label.

The efficacy of UP-EndPendi Hydrocap will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if UP-EndPendi Hydrocap is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-EndPendi Hvdrocap at the above-specified rates:

Foxtail, Yellow

GRASSES CONTROLLED		Coosegrass	Rottboellia exaltata
Common Name	Scientific Name	Itchgrass Johnsongrass (from seed)	Sorghum halepense
Barnyardgrass	Echinochloa crus-galli	Junglerice Lovegrass (from seed)	Echinochloa colona Eragrostis spp.
Bluegrass, Annual	Poa annua	Panicum, Browntop	Panicum fasciculatum
Crabgrass	Digitaria spp.	Panicum, Fall	Panicum
Crowfootgrass	Dactyloctenium aegyptium		dichotomiflorum
Foxtail, Giant	Setaria faberi	Panicum, Texas Sandbur, Field	Panicum texanum Cenchrus incertus
Foxtail, Green	Setaria viridis	Sandour, Field	Centra a meerus



Signalgrass	Brachiaria platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa

## BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name
Burweed, Lawn	Soliva pterosperma
Carpetweed	Mollugo verticillata
Chickweed, Common	Stellaria media
Chickweed, Mouseear	Cerastium vulgatum
Clover, Hop	Trifolium procumbens
Cudweed	Gnaphalium spp.
Eveningprimrose	Oenothera biennis
Fiddleneck	Amsinckia intermedia
Filaree	Erodium spp.
Henbit	Lamium amplexicaule
Knotweed, prostrate	Polygonum aviculare
Kochia	Kochia scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus spp.
Puncturevine	Tribulus terrestris
Purslane	Portulaca oleracea
Pusley, Florida	Richardia scabra
Rocket, London	Sisymbrium irio
Shepherdspurse	Capsella
	bursa-pastoris
Smartweed, Pennsylvania	Polygonum pensylvanicum
Speedwell, Corn	Veronica arvensis
Spurge, Annual	Euphorbia spp.
Spurge, Prostrate	Euphorbia humistrata
Woodsorrel, Yellow	Oxalis stricta
Velvetleaf (Buttonweed)	Abutilon theophrasti

## **Table 4. ORNAMENTAL SPECIES**

UP-End herbicidePendi Hydrocap sprays may be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to Table 3. Application Rates For Weed Control Production Ornamentals.

## TREES

Scientific Name
Alnus glutinosa
Malus spp.
Thuja occidentalis
Arbutus spp.
Fraxinus
pennsylvanica

Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus
Aspen, Quaking	grandidentata Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra

#### TREES (continued)

Common Name	Scientific Name
Buckeye, Red	Aesculus pavia
Cedar, White	Thuja occidentalis
Chamaecyparis, Boulevard	Chamaecyparis pisifera
Cherry, Black	Prunus serotina
Cherry, Choke	Prunus virginiana
Cherry, Kwanzan	Prumus serrulata
Cherry, Nanking	Prunus tomentosa
Cottonwood	Populus deltoides
Crabapple	Malus spp.
Crepe Myrtle	Lagerstroemia indica
Cryptomeria, Japanese Cedar	Cryptomeria japonica
Cypress, Bald	Taxodium distichum
Cypress, Leyland	Cupressocyparis leylandii
Dogwood, Flowering	Cornus florida
Dogwood, Korean	Cornus kousa
Dogwood, Silky	Cornus amomum
Dogwood, Shrub	Cormus spp.
Elm	Ulmus japonica
Elm, Winged	Ulmus alata
Eucalyptus (Silver-dollar) tree	Eucalyptus cinerea
Fir, Balsam	Abies balsamae
Fir, Douglas	Pseudotsuga
	menziesii
Fir, Fraser	Abies fraseri
Fir, White	Abies concolor
Franklinia	Franklinia spp.
Fringe tree	Chlonenthus retusus
Ginkgo	Ginkgo biloba
Gum, Black	Nyssa sylvatica
Gum, Sour	Nyssa sylvatica
Haw, Black	Viburnum prunifolium
Hawthorn	Crataegus spp.
Hemlock, Canada	Tsuga canadensis
Hemlock, Eastern	Tsuga canadensis
Holly, American	Ilex opaca
Honeylocust	Gleditsia triacanthos
Lilac, Common	Syringa vulgaris
Lilac, Japanese Tree	Syringa reticulata
Linden	Tilia spp.



rendi riyarocap iaoci 1/30	/12		Page
Magnolia, Saucer	Magnolia soulangiana	Spruce, Dwarf Alberta	Picea glauca 'albertiana'
Magnolia, Southern	Magnolia grandiflora	Spruce, Norway	Picea abies
Magnolia, Star	Magnolia stellata	Spruce, White	Picea glauca
Maidenhair Tree	Ginkgo biloba	Sweetgum	Liquidambar
Maple, Norway	Acer platanoides		styraciflua
Maple, Japanese	Acer palmatum	Sycamore	Platanus occidentalis
Maple, Red	Acer rubrum	Trachycarpus	Trachycarpus spp.
Maple, Sugar	Acer saccharum	Tulip tree	Liriodendron
TREES (continued)			tulipifera
Common Name	Scientific Name	TREES (continued)	
Nannyberry, Rusty	Viburnum rufidulum	Common Name	Scientific Name
Oak, Chinquapin	Ouercus	Walnut, Black	Juglans nigra
The same of the sa	muehlenbergii	Willow, Weeping	Salix babylonica
Oak, Live	Quercus virginiana	Yellowwood	Cladrastis lutea
Oak, Pin	Quercus palustris	SHRUBS	
Oak, Red	Quercus rubra	Common Name	Scientific Name
Oak, Swamp Chestnut	Quercus michauxii	Abelia, Glossy	Abelia grandiflora
Oak, Water	Quercus nigra	Alder, Witch	Fothergilla gardenii
Oak, White	Quercus alba	Aucuba, Gold	Aucuba japonica
Oak, Willow	Quercus phellos	Azalea	Rhododendron sp.
Olive	Olea europaea		
Palm, Date	Phoenix spp.	Bamboo, Heavenly	Nandina domestica
Palm, Fan	Washingtonia spp.	Barberry	Berberis gladwynensis
Palm, Pindo	Butia spp.	Barberry, Japanese	Berberis thunbergii
Palm, Washington	Washingtonia spp.	Blue Indigo Bush	Dalea gregii
Peach	Prunus persica	Bottlebrush, Lemon	Callistemon citrinus
Pear, Bradford	Pyrus calleryana	Boxwood, Common	Buxus sempervirens
navorana -	'Bradford'	Boxwood, Japanese	Buxus microphylla
Pecan	Carya illinoensis	Brittlebush	Encelia farinosa
Pine, Austrian	Pinus nigra	Buttonbush	Cephalanthus
Pine, Italian Stone	Pinus pinea	Dationousii	occidentalis
Pine, Loblolly	Pinus taeda	Camellia	Camellia japonica
Pine, Monterey	Pinus radiata	Cape Jasmine	Gardenia jasminoides
Pine, Red	Pinus resinosa	Cassia, Feathery	Cassia artemisioides
Pine, Scotch	Pimus sylvestris	Cordyline	Cordyline spp.
Pine, Virginia	Pinus virginiana	Correa	Correa spp.
Pine, White	Pinus strobus	Cotoneaster	Cotoneaster
Plum, Purple Leaf	Prunus cerasifera	Connectates	apiculatus
Poplar, Black	Populus nigra	Cotoneaster, Bayberry	Cotoneaster dammeri
Redcedar, Eastern	Juniperus virginiana	Cotoneaster, Rock	Cotoneaster
Redcedar, Western	Thuja plicata	Colonicaster, Rock	horizontalis
Red Ironbark	Eucalyptus sideroxylon 'Rosea'	Cypress, Italian	Cupressus sempervirens
Redwood, Dawn	Metasequoia glyptostroboides	Cypress, Leyland	Cupressocyparis leylandii
Sequoia, Giant	Sequoiadendron	Deutzia, Slender	Deutzia gracilis
2 20 5	giganteum	Dogwood, Red Twig	Cornus sericea
Serviceberry	Amelanchier laevis	Elacagnus	Elaeagmis ebbingei
Sourwood	Oxydendrum arboreum	Escallonia	Escallonia fradesii
Spruce, Colorado Blue	Picea pungens	Euonymus	Euonymus fortunei



Euonymus, Golden	Euonymus japonica
Euonymus, Winged	Euonymus alata
Firethorn	Pyracantha coccinea
Forsythia, Border	Forsythia intermedia
Fragrant Olive	Osmanthus fragrans
Fuschia, California	Zauschineria californica
Gardenia	Gardenia jasminoides
Hawthorne, Indian	Raphiolepis indica
Hibiscus	Hibiscus syriacus
Holly, Chinese	Ilex cornuta

## SHRUBS (continued)

SHRUBS (continued)	
Common Name	Scientific Name
Holly, Japanese	Ilex crenata
Holly, Fosters	Ilex attenuata 'Fosteri'
Holly, Savannah	Ilex attenuata
Holly, Yaupon	Ilex vomitoria
Honeysuckle, Bush	Diervilla lonicera
Hopseed Bush	Dodonaea viscosa
Hopbush	Dodonaea viscosa
Hydrangea	Hydrangea macrophylla
Juniper	Juniperus sp.
Juniper, Chinese	Juniperus chinensis v. pfitzer
Juniper, Shore	Juniperus conferta
Juniper, Trailing	Juniperus horizontalis
Laurel, Cherry	Prunus laurocerasus
Laurel, Mountain	Kalmia latifolia
Laurel, Otto Luyken	Prunus laurocerasus
Laurel, Schipka	Prunus schipkanensis
Laurustinus	Viburnum tinus
Lavender, English	Lavandula angustifolia
Leucothoe	Leucothoe fontanesiana
Leucothoe, Coast	Leucothoe axillaris
Lilac, Cut-leaf	Syringa laciniata
Lily-of-the-Nile	Agapanthus africanus
Mahonia	Mahonia aquifolium
Mock Orange	Pittosporum tobira
Myrtle, Compact	Myrtus communis
Myrtle, Wax	Myrica cerifera
Nandina	Nandina domestica
Oleander	Nerium oleander
Oregon Grape	Mahonia aquifolium
Osmanthus	Osmanthus fragrans
Palm, European Fan	Chamaerops humilis
Palm, Mediterranean Fan	Chamaerops spp.
Phlox, Prickly	Leptodactylon californicum

Photinia, Fraser	Photinia x Fraseri
Pieris, Japanese	Pieris japonica
Pine, Mugo	Pinus mugo
Plum, Natal	Carissa grandiflora
Privet, California	Ligustrum ovalifolium
Privet, Glossy	Ligustrum lucidum
Privet, Variegated	Ligustrum sinensis
Privet, Waxleaf	Ligustrum japonicum
Pyracantha	Pyracantha coccinea
Quince, Flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens

## SHRUBS (continued)

Common Name	Scientific Name
Redroot	Ceanothus spp.
Rhododendron	Rhododendron spp.
Robira	Pittosporum tobira
Rose	Rosa spp.
Spice Plant	Illicium parviflorum
Spiraea	Spiraea vanhouttei
Spiraea, Anthony Waterer	Spiraea X bumalda
Spiraea, Japanese	Spiraea japonica
Sweet Bay	Laurus nobilis
Trumpet Bush	Tecoma stans
Verbena, Lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild Lilac	Ceanothus spp.
Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern*	Podocarpus macrophyllus
Yucca, Adam's Needle	Yucca filamentosa
Yucca, Weeping	Yucca pendula

<sup>\*</sup> Do not apply UP-End herbieidePendi Hydrocap during spring growth or injury to terminals may occur.

## GROUND COVERS

Scientific Name
Ajuga reptans
Aptenia cordifolia
Fragaria chiloensis
Arctotheca calendula
Potentilla verna
Baccharis pitularis



Daisy, Trailing African	Osteospermum fruticosum
Dymondia	Dymondia margaretae
Gazania	Gazania splendens
Iceplant, Large Leaf	Carpobrotus edulis
Ivy, English	Hedera helix
Ivy, Geranium	Pelargonium peltatum
Jasmine, Asiatic	Trachelospermum asiaticum
Jasmine, Primrose	Jasminum mesnyi
Jessamine, Carolina	Gelsemium sempervirens
Manzanita, Bearberry	Arctostaphylos uva-ursi

CROUND	COVERS	(continued)
GROCIAN	COTLING	(commucu)

Common Name	Scientific Name
Miscanthus	Miscanthus spp.
Mondograss	Ophiopogon japonica
Morning glory	Convolvulus spp.
Myoporum	Myoporum parviflolium
Pachysandra	Pachysandra terminalis
Potentilla	Potentilla fruticosa
Red Apple	Aptenia cordifolia
Rosemary	Rosemarinus officinalis
Rose-Of-Sharon	Hypericum calycinum
Sand Strawberry	Fragaria chiloensis
Sedum	Sedum spurium
St. Johnswort, Creeping	Hypericum calycinum
Stonecrop	Sedum spurium
Verbena, Peruvian	Verbena peruviana
Vervain	Verbena peruviana
Vetch, Crown	Vicia sativa
Vinca	Vinca minor
Wintercreeper	Euonymous fortunei

## PERENNIALS

Common Name	Scientific Name
Acacia	Acacia redolens
Asparagus	Asparagus spp.
Aster, New York	Aster novi-belgii
Aster, Stokes	Stokesia laevis
Astilibe (False Spirea)	Astilibe spp.
Avens	Geum triflorum
Baby's Breath	Gypsophila elegans
Baby's Breath	Gypsophila paniculata
Beard-Tongue	Penstemon spp.
Bellflower	Campanula spp.

Bellflower, Willow	Campanula persicifolia
Bird of Paradise	Caesalpinia pulcherrima
Black-eyed Susan†	Rudbeckia hirta
Blanket Flower†	Gaillardia aristata
Blanket Flower†	Gaillardia x grandiflora
Bleeding Heart	Dicentra spectabilis
Butterfly Weed	Asclepias tuberosa
California Poppy	Eschscholzia california
Calla Lily	Zantedeschia aethiopica
Canna, Common Garden	Canna generalis 'Lucifer'

## PERENNIALS (continued)

Common Name	Scientific Name
Carex	Carex spp.
Chincherinchee	Ornithogalum
	thyrsoides
Clover, Crimson†	Trifolium incarnatum
Columbine	Aquilegia 'McKana Giant'
Columbine	Aquilegia x hybrida
Coreopsis (tickseed)†	Coreopsis lanceolata
Crinum Lily	Crinum spp.
Crocus	Crocus spp.
Daffodil	Narcissus spp.
Daylily	Hemerocallis spp.
Fairy Duster	Calliandra eriophylla
Fern, Asparagus	Asparagus officinalis
Fern, Boston	Nephrolepis exaltata
Fern, Hay-scented	Dennstaedtia punctilobula
Fern, Leatherleaf*	Rumohra adiantiformis
Fortnight Lily	Moraea spp.
Foxglove	Digitalis purpurea
Freesia	Freesia x hybrida
Gaillardia	Gaillardia pulchella
Geum	Geum spp.
Gladiolus	Gladiolus spp.
Heather, Dwarf	Calluna vulgaris
Hosta	Hosta spp.
Indian Blanket†	Gaillardia pulchella
Iris, Japanese	Iris kaemphera
Lantana, Weeping	Lantana
	montevidensis
Leopards Bane	Doronicum cordatum
Lily	Lillium spp.
Liriope, Big Blue	Liriope muscari





Liriope, Creeping	Liriope spicata
Liriope, Variegated	Liriope muscari
Moonbeam	Coreopsis verticillata
Montbretia	Crocosmia crocosmiiflora
Mugwort, Western	Artemesia ludoviciana
Nightshade	Solanum spp.
Orchid, Peacock	Acidanthera bicolor
Oxeye Daisy†	Chrysanthemum leucanthemum
Palm, Areca	Chysalidocarpus lutescens
Palm, Pygmy Date	Phoenix roebelence
Palm, Washington	Washington robusta
Peony, Chinese	Paeonia lactiflora
Purple Coneflower†	Echinacea purpurea

## PERENNIALS (continued)

Common Name	Scientific Name
Purple Gay-feather	Liatris pycnostachys
Purple Loosestrife	Lythrum virgatum
Rodgersia	Rodgersia henricie
Rosemary	Rosmarinus officinalis
Sedge	Carex spp.
Shasta Daisy†	Chrysanthemum x superbum
Statice	Limonium latifolia
Statice, German	Goniolimon tartaricum
Sweet Flag	Acorus calamus
Tickseed†	Coreopsis lanceolata
Texas Bluebonnet	Lupinus texenis
Tulip	Tulipa spp.
Wonder Flower	Ornithogalum thyrsoides
Yarrow†	Achillea millefolium
Zephyr Lily	Zephyranthes spp.

- \* Applications of UP-End herbicidePendi Hydrocap to immature fems (during periods of new growth of fronds) may result in some injury.
- † These plants have shown tolerance to UP-EndPendi Hydrocap applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed

## ORNAMENTAL GRASSES

Common Name	Scientific Name
Beach Grass	Ammophila breviligulata
Fescue, Blue	Festuca glauca
Fescue, Sheep	Festuca ovina

Fountain Grass	Pennisetum setaceum
Pampas Grass	Cortaderia selloana
Reed Canary Grass	Phalaris arundinacea
Reed, Giant	Arundo spp.
Ribbon Grass	Phalaris arundinacea
Tufted Hair Grass	Deschampsia caespitosa

## BEDDING PLANTS

Common Name	Scientific Name
Ageratum	Ageratum houstonianum
Alyssum*	Alyssum saxatile
Anemone, Poppy-flowered	Anemone coronaria
Artemesia	Artemesia spp.
Balloonflower	Platycodon grandiflorum
Begonia*	Begonia spp.
Cabbage, Ornamental	Brassica olereacea

#### BEDDING PLANTS (continued)

Common Name	Scientific Name					
Caladium	Caladium spp.					
Cast-Iron Plant	Aspidistra elatior					
China Aster*	Callistephus chinensis					
Crocosmia, Montebretia	Crocosmia x crocosmiiflora					
Dahlia*	Dahlia spp.					
Dianthus	Dianthus barbatus					
Dusty Miller	Senecio cineraria					
Gayfeather	Liatris spp.					
Gazania, Treasure Flower	Gazania rigens					
Gazania, Trailing	Gazania rigens leucolaena					
Gloxinia	Gloxinia simningia					
Kale, Ornamental	Brassica napus					
Marigold, African	Tagetes erecta					
Moss Rose*	Portulaca grandiflora					
Mum, Garden	Chrysanthemum spp.					
Periwinkle*	Vinca major					
Periwinkle, Rose	Catharanthus roseus					
Petunia*	Petunia spp.					
Plumosa Cockscomb	Celosia cristata					
Portulaca*	Portulaca grandiflora					
Salvia*	Salvia splendens					
Snapdragon	Antirrhinum majus					
Statice*	Limonium spp.					
Sweet William	Dianthus barbatus					
Vinca*	Vinca major					

<sup>\*</sup> Do not apply UP-EndPendi Hydrocap sooner than four weeks after transplanting for these annuals.

Use the lower labeled rate.



UP-End herbicidePendi Hydrocap may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of

such plants at the specified rate. Evaluate treated plants 1-2 months following treatment for possible injury.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: DO NOT STORE BELOW 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse after emptying, then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Containers less than or equal to 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Containers larger than 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ½ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on it end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

## IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or erop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

DRIVE, ARSENAL, SAHARA, PLATEAU and VANTAGE are registered trademarks of BASF Corporation.

Pendi Hydrocap label 1/30/12

Pag

AquaCap is a trademark of BASF Corporation.

Roundup and Roundup PRO are registered trademarks of Monsanto Company.

Karmex and Oust are registered trademarks of E. I. duPont de Nemours and Company.

Finale is a registered trademark of Bayer AG.

Ornamec and Trimec are registered trademarks of PBI Gordon Corp.

Three Way is a registered trademark of Lesco Technologies, LLC.

Gallery is a registered trademark of Dow AgroSciences.

Princep is a registered trademark of Syngenta.

Rev. 7/12/10



## UP-EndPendi Hydrocap label notes:

Rev. 1/30/12 – notification of alternate brand name Pendi Hydrocap.

Rev. 7/12/10 - changes made based on EPA approval of this date.

Rev. 12/21/09 – application for registration. Based 0n BASF Pendulum AquaCap, 241-416. PPLS March 2008. Some copyright-type changes made.



## PI United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax)

Rebecca A. Clemmer Regulatory Manager

October 17, 2011

Kathryn Montague (PM 25)
Document Processing Desk (FPL)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

UP-End Herbicide (EPA Reg. No. 70506-230)

Final Printed Label

Dear Ms. Montague:

Enclosed please find one copy of the subject label, revised in accordance with the Notice of Pesticide Registration dated July 12, 2010.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

rebecca.clemmer@uniphos.com

137

Form Approved, OMB No. 2070-0060, Approval expires 5-31-98
Registration OPP Identifier Number



## **United States**

Amendment

Registration

VLIA	Environmenta	Prote	ction A	gency	-	x Oth	or				
Washington, DC 20460				Tree.							
	App	olicatio	on for P	esticid	e - Section	11					
Company/Product Number 70506-230				A 22 YEAR - PARKED	A Product Mai	nager		3. Prop	osed Cla	ssification	
Company/Product (Name)     United Phosphorus, Inc/UP-End Herbicide			PM# 25				X N	x None Restricted			
5. Name and Address of App United Phosphorus, Inc. 630 Freedom Business Cente King of Prussia, PA 19406	er, Suite 402			(b)(i), to: EPA F	pedited Revieus my product is Reg No.						
			Sect	ion - II			5 0 4				
Amendment – Explain b	elow			×	Final printed	labels in	respons	se to			
Resubmission in respon	se to Agency letter dated		-		Agency letter "Me Too" App			2010			
Notification – Explain be	low				Other - Expla	ain belov	W				
Explanation: Use additional Submission of final printed lab		or Section	n I and Se	ection II.)	No.		16				
	THE RESERVE		Sect	tion III	50.00						
1. Material This Product Will	be Packaged in:							147	5		
Child-Resistant Packaging Yes x No	Unit Packaging Yes x No			Water Soluble Packaging Yes X No			X P	2. Type of Container  Metal  x Plastic  Glass			
*Certification must be submitted	If "Yes" Unit Packaging wgt.	No. pe	The second second	"Yes" ackage w	gt	50 MARK 100			aper ther (Spe	ecify)	
Location of Net Contents In X Label	nformation Container			s) Retail Container  30, 110 gallon  5. Location of label directions  x On Label On Label accompanying						at	
6. Manner in Which Label is A	Manner in Which Label is Affixed to Product  Lithograph Paper glued Stenciled  Lithograph Stenciled										
			Sect	ion IV		The same					
1. Contact Person (Complete	items directly below for i	dentificat	tion of indi	ividual to	be contacted,	if neces	sary, to	process t	his applic	cation.)	
Name Title Telephone No. (Include Area Co- Rebecca A. Clemmer Regulatory Manager 610-491-2828				Area Code)	4.5						
I certify that the statements I h I acknowledge that any knowin both under applicable law	ave made on this form and		chments th		POLYGON CHOICE RECORDS IN COMMERCIAL PROPERTY.		A CONTRACTOR OF THE PARTY OF TH	6	S. Date A Recei	Application ved	
2. Signature			3. Title						(5	Stamped)	
R.a. Clem	Regulatory Manager  Regulatory Manager										
4. Typed Name			. Date	7 0044	of every	74				:.	
Rebecca A. Clemmer Octob		october 17	ober 17, 2011						12/2/2/2		

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

White - EPA File Copy (Original) Applicant Copy

## **UP-End Herbicide**

For Preemergent Weed Control in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT OTHER INGREDIENTS: 61.3% (1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous carrier.)

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

	FIRST AID
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
	container or label with you when calling a poison control center or doctor or going for treatment call the Rocky Mountain Poison Control Center at 1-866-673-6671.

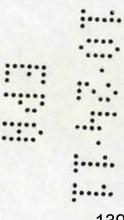
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 1-800-247-1557 • www.upi-usa.com

EPA Reg. No. 70506-230 EPA Est. No.

**Net Contents** 



## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

## CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

### Personal Protective Equipment (PPE):

Some materials that are chemically resistant to these products are listed below. For more options, refer to Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

Follow manufacturer's instruction for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

Users should:

- · Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as
  possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

Do not apply this product through any type of irrigation system.

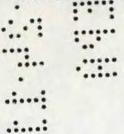
UPI does not authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application.

For requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

Do not apply UP-END herbicide in greenhouses, shadehouses or other enclosed structures.

Not for use for commercial seed production.



## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- · Coveralls
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- Shoes plus socks

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

## MODE OF ACTION

**UP-End** is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

## PRODUCT INFORMATION

APPLICATION USE SITES – for preemergence control of grasses and certain broadleaf weed species as they germinate.

Turfgrass sites (golf course, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas. such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas and sod farms.

Grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and established wildflower plantings where weed control is desired.

Bulb plantings, non-bearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries and tree plantations for site preparation and maintenance. Applications can be made on, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses and bedding plants:

In and around field, liner and container ornamental production.

APPLICATION INSTRUCTIONS

UP-End will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use UP-End together with herbicides registered for postemergence use in managed turf sites, landscape ornamentals and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas. The efficacy of UP-End will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If UP-End is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

When applied according to label directions and under normal growing conditions, **UP-End** or **UP-End** tank-mix combinations will not cause crop injury. Over-application can cause crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-End.

#### MIXING INSTRUCTIONS

UP-End may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to UP-End alone.

When using tank mixtures or sequential applications with UP-End, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

### Mixing Instructions

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing UP-End or UP-End tank
mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer,
application instructions, and compatibility determinations.

#### 2. UP-End

When using UP-End alone, add UP-End to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

#### 3. UP-End Tank Mixes

Add the tank mixture ingredients in the order listed below before adding UP-End:

- (a) Wettable Powder (WP) formulations make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations add the F formulation to the partially filled tank while agitating.
- (d) Add UP-End to the partially filled tank while agitating.
- (c) Water Soluble Concentrate (WSC) formulations add the WSC formulation to the partially filled tank while agitating.
- (f) Emulsifiable Concentrate (EC) formulations add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, agitate thoroughly to resuspend the mixture before spraying is resumed.

#### 5. BACKPACK SPRAYER

• Deght with a clean spray tank. Fill the spray tank one-half full with clean water and add the required amount of IIP-End. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, agitate thoroughly before spraying is resumed.

## 6. LIQUID FERTILIZERS

Before mixing, always test small quantities using a simple jar test. Add the required amount of **UP-End** to a half filled spray tank while agitating; then add the fertilizer product. Complete filling spray tank to desired level.

SPRAYING INSTRUCTIONS
GROUND APPLICATIONS

.....

Apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area, using a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turfgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those listed. Do not apply when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. If contact occurs, rinse immediately with water to avoid staining. Do not mechanically scrub until the surface area is thoroughly rinsed. Allow treated turfgrass to dry before entering to avoid staining onto non-treated surfaces.

#### AERIAL APPLICATIONS

Apply uniformly in 5 or more gallons of water per acre. Take care to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. To avoid overlapping and possible crop injury, use a flagman or an automatic mechanical flagging unit on the aircraft.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipmentand weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Observe more stringent state regulations. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows
  produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower
  pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of
  increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower
  spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back
  produce the largest droplets and the lowest drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length with further reduce drift without reducing swath width.

## APPLICATION HEIGHT

Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the part of the

aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind is below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### SENSITIVE AREAS

Apply the pesticide only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

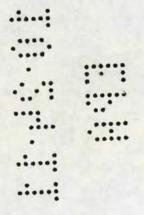


Table 1. RESIDENTIAL , GOLF COURSE , COMMERCIAL AND OTHER NON-RESIDENTIAL TURFGRASS USES

**Application Rates For Preemergence Weed Control** 

Turfgrass Species	Weeds	fl. oz.	pints	Comments	
Turiginus Species		Product per 1,000 sq.ft.	Product per acre		
COOL SEASON G	RASSES				
Bluegrass, Kentucky	Barnyardgrass	All	Turf Uses:	Make a repeat	
Fescue, Fine	Crabgrass	1.1 to 1.6 fl oz	3.1 to 4.2 pints	application of 2.2 to 3.1	
Fescue, Tall Ryegrass, Perennial	Evening Primrose Fall Panicum Foxtail Hop Clover Knotweed Oxalis Poa annua Prostrate Spurge Purslane	Initial application be spring.	efore weed germination in	pints/A (0.86 to 1.1 oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass		al and Sod Farm	Make a repeat	
			Uses Only <sup>2</sup> :	application of 3.1	
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	pints/Acre (1.1 oz/1000	
		Residentia	nmercial and Other Non- l Turf Uses Only:	sq. ft.) if the lower rate was used initially or for	
		1.1 to 2.3 oz	3.1 to 6.3 pints	extended goosegrass	
		Initial application before weed germination in spring.		control after 5-8 weeks.	
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annual		Turf Uses:	Apply in late summer of	
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Apply a repeat application of 3. to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) after 5-weeks for extended <i>Podannua</i> control.	
Bentgrass or	Barnyardgrass	All Turf Uses		Make a repeat	
established Poa	Crabgrass		eens and Tees):	application of 2.2 to 3.1	
annua <sup>3</sup> (1/2 inch	Evening Primrose	1.1 fl oz	3.1 pints	pints/Acre (0.86 to 1.1	
height or taller)	Fall Panicum Foxtail Hop Clover Knotweed Poa annua Oxalis Prostrate Spurge Purslane	Initial application be spring.	fore weed germination in	oz/1000 sq. ft.) after 5-8 weeks for extended control or where heavy weed infestations are expected.	
	Goosegrass	All Turf Uses		Apply a repeat application of 3.1 pts/Acre (1.1 oz/1000 sq. ft.) for extended goosegrass control after 5-8 weeks.	
		(Non-Greens and Tees):			
		1.1 fl oz 3.1 pints Initial application before weed germination in spring.			
					Chickweed Corn Speedwell
	Cudweed Henbit Lawn Burweed Poa annua	1.1 to 1.6 fl oz	3.1 to 4.2 pints	germination.	

		UP-END herbici	de <sup>1</sup>	
Turfgrass Species	Weeds	fl. oz.	pints	Comments
		Product per 1,000 sq.ft.	Product per acre	
WARM SEASON G	RASSES			
Bahiagrass Bermudagrass	Barnyardgrass Crabgrass	Residential and Sod Farm Turf Uses Only:		Make a repeat application of 2.2 to 3.1
Buffalograss	Evening Primrose	1.1 to 1.6fl oz	3.1 to 4.2 pints	pints/Acre (0.86 to 1.1
Centipedegrass Fescue, Tall	Fall Panicum Foxtail		nmercial and Other Non- al Turf Uses Only:	oz/1000 sq. ft.) after 5-8 weeks if necessary.
Paspalum,	Hop Clover	1.1 to 2.3 fl oz	3.1 to 6.3 pints	
seashore St. Augustinegrass Zoysiagrass	Knotweed Poa annua Oxalis Prostrate Spurge Purslane	Initial application before weed germination in spring.		
	Goosegrass	All Turf Uses (Non-Greens and Tees):		An additional applicatio of 3.1 pt/Acre (1.1
		1.1 fl oz	3.1 pints	oz/1000 sq. ft.) may be
		Apply before weed germination in spring.  Make a second application at 3.1 pints (1.1 oz/1000 sq.ft.) 5-8 weeks later.		made for extended goosegrass control 8 weeks after the second application.
	Chickweed Corn Speedwell Cudweed Henbit Lawn Burweed Poa annua	All Turf Uses:		Apply in late summer or
		1.1 to 1.6 fl oz	3.1 to 4.2 pints	early fall before weed germination. Make a repeat application of 3.1 to 4.2 pints (1.1 to 1.6 oz/1,000 sq. ft.) 5-8 weeks for extended <i>Poa</i> annua control.

Do not use more than 4.2 pints (2.1 quarts) per acre per application on residential and sod farm turfgrass.

Do not use more than 6.3 pints (3.1 quarts) per acre per application on golf course turfgrass, commercial or other non-residential turfgrass.



Residential is defined as turf in any residential situation as well as home lawns, schools, parks and playgrounds.

<sup>&</sup>lt;sup>3</sup> Not for use on bentgrass or *Poa annua* greens or tees.

The efficacy of **UP-End** is best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **UP-End** is not activated by rainfall or irrigation within 30 days, weed control may be erratic.

To prevent establishment of weeds along the edges of treated area it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is undesirable, <u>Do not rub or scrub surface</u>, <u>but rinse area immediately using a heavy spray of water</u> to avoid staining. Allow treated turfgrass to dry before entering to avoid staining non-treated surfaces.

#### TURFGRASS TANK MIXES

**UP-End** can be mixed with postemergence herbicides to control emerged weeds in non-residential turfgrasses. For annual grass control, applications can be made with DRIVE® or MSMA to control emerged weeds.

Broadleaf weeds can be controlled using Trimec, Three Way, 2-4,D and other similar products.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End and follow those that are most restrictive.

#### TURFGRASS RESTRICTIONS

- Use on well established turfgrass with a dense and uniform stand. If turf has been thinned or damaged due to winter injury, excessive moisture, etc., allow turf to recover before application.
- On newly planted areas, do not apply until the turfgrass has filled in and has been mowed at least four times.
   Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.
- · Do not use on bentgrass or Poa annua greens and tees or injury may occur.
- Delay reseeding or winter overseeding of treated turfgrass for at least three (3) months following the last UP-END herbicide application.
- Delay sprigging turfgrass for five (5) months after application.

#### LANDSCAPE AND GROUNDS MAINTENANCE

**UP-End** can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds in areas such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments. Ensure that these areas are free of emerged weeds before application. To remove emerged weeds either cultivate or tank mix **UP-End** with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species have been tested for plant safety. Refer to the list of ornamental plant species found in this label. While **UP-End** may be used on plant species not listed on this label, a small number of plants should be tested at the specified rate to evaluate suitability before a broad-use application is made.

Refer to Table 2. Application Rates for Weed Control in Ornamental Plantings, Tree Plantations and Other Noncropland Areas. Avoid contact of spray solution with stone, wood, or other porous surfaces as staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

## ORNAMENTAL PLANTINGS AND TREE PLANTATIONS INCLUDING NONCROPLAND AREAS

Use UP-End for grounds maintenance in noncropland areas, preemergence control of the weed species listed in and around established tree plantations for site preparation, and maintenance and conifer and hardwood seedling nurseries and pulpwood and fiber farms. UP-End may be used for hardwood and conifer regeneration on conservation reserve program (CRP) land. UP-End can also be used in Christmas trees and non-bearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, and in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to Table 2. Application Rates for Weed Control in Ornamentals Plantings, Tree Plantations and Other Noncropland Areas.

Applications at planting or to established trees: When applying at planting, it is important that slit closure be achieved to prevent UP-End from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. Refer to section on Instructions and Restrictions in Landscape and Ornamental Plantings before making an application.

For postemergence control of weeds, use tank-mix combinations of UP-End plus VANTAGE. Roundup. Finale, or other labeled herbicides. Refer to approved labeling for species recommendations. Determine rates for the tank mix compounds from the product labels of both UP-End and partner herbicides before use. Take care to prevent

combination sprays from direct contact with desirable foliage or injury may result. **UP-End** plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict **UP-End** usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

#### ORNAMENTAL BULBS

**UP-End** may be applied for control of susceptible annual weeds in ornamental bulbs listed under the Perennial Section on the label (crocus, daffodil [narcissus], gladiolus, lilies, tulip, etc.). Apply **UP-End** before, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

#### WILDFLOWERS

**UP-End** may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennial section on the label. Those perennial species noted (\*Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.) have been evaluated for plant tolerance to applications of **UP-End** at 4.2 pints (2.1 quarts) per acre. **UP-End** may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply **UP-End** no sooner than 4 weeks after wildflowers have emerged but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before making an application.

Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to **UP-End** may vary greatly. Test desirable species carefully to determine if area-wide applications can be made.

#### NON-BEARING FRUIT AND NUTCROPS AND VINEYARDS

**UP-End** may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Citrus Olive Pistachio
Apple Fig Peach Plum
Apricot Grape Pear Prune

Cherry Nectarine Pecan Walnut, English

### NON-CROPLAND WEED CONTROL

Use **UP-End herbicide** for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

#### INDUSTRIAL (UNIMPROVED) TURF

**UP-End** will provide preemergence control of the annual grasses and broadleaf weeds listed in **Weed Species Controlled** section of this label that might germinate in established grasses in rights-of-way, roadsides, construction sites, parks, substations or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, DRIVE®, VANTAGE®, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

### TOTAL VEGETATION CONTROL

UP-End may be tank mixed with ARSENAL®, SAHARA®, PLATEAU®, VANTAGE®, Roundup® PRO, Karmex®, Finale®, Oust®, diuron, glyphosate or other products to provide bare ground, or total vegetation control. UP-End can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Do not tank mix with ARSENAL, SAHARA or PLATEAU herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For Kochia control use a combination of UP-End with ARSENAL herbicide or diuron if control has been a problem for other herbicides.

....

# TABLE 2. APPLICATION RATES FOR WEED CONTROL IN LANDSCAPE ORNAMENTALS, TREE PLANTATIONS, AND OTHER NONCROP AREAS\*

For preemergence control of the weed species listed, apply UP-End as follows:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 1 instructions.

For extended weed control, repeat applications of UP-End can be made.

# INSTRUCTIONS AND RESTRICTIONS

# LANDSCAPE AND ORNAMENTAL PLANTINGS<sup>1</sup>

Site	Application Instructions and Restrictions
Landscape Plantings <sup>2</sup>	Do not apply to newly-transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.
	2. Apply as a directed or over-the-top spray.
	<ol> <li>Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.</li> </ol>
Ornamental Bulbs <sup>3</sup>	UP-End may be applied to bulb species listed on the label.
	2. Apply before, during or after bulb emergence, but not during bloom.
Wildflowers <sup>3</sup>	<ol> <li>UP-End may be applied in plantings of wildflowers listed on the label. Refer to specific instructions for rate and plant tolerance.</li> </ol>
	<ol><li>For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.</li></ol>

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-End or injury may occur.

### HAND-HELD SPRAY EQUIPMENT:

Use table 2 above to determine the amount of **UP-End** to be applied per 1000 square feet, in sufficient water for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in **MIXING INSTRUCTIONS** section of this label.

**UP-End** will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any necessary cultivation must be shallow. **UP-End** may be used together with herbicides registered for postemergence use (i.e. glyphosate or Finale) for the control of established weeds. Do not apply sprays containing glyphosate or Finale over the top of desirable plants. A **UP-End** treatment may be followed by any registered herbicide to control weeds not listed on the **UP-End** label.

The efficacy of **UP-End** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **UP-End** is not activated by rainfall or irrigation wants 50 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of UP-End herbicide at the above-specified rates:

Crabgrass

|--|

		C C
Common Name	Scientific Name	Crowfootgrass
Barnyardgrass	Echinochloa crus- galli	Foxtail, Giant Foxtail, Green
Bluegrass, Annual	Poa annua	Foxtail, Yellow

Digitaria spp Daceyloctenium aegyptium Setarta faberi Setaria viridis Setaria glauca

<sup>&</sup>lt;sup>2</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

<sup>&</sup>lt;sup>3</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

Goosegrass	Eleusine indica	Clover, Hop	Trifolium procumbens
Itchgrass	Rottboellia exaltata	Cudweed	Gnaphalium spp.
Johnsongrass (from seed)	Sorghum halepense	Evening primrose	Oenothera biennis
Junglerice	Echinochloa colona	Fiddleneck	Amsinckia intermedia
Lovegrass (from seed)	Eragrostis spp.	Filaree	Erodium spp.
Panicum, Browntop	Panicum fasciculatum	Henbit	Lamium amplexicaule
Panicum, Fall	Panicum	Knotweed, prostrate	Polygonum aviculare
	dichotomiflorum	Kochia	Kochia scoparia
Panicum, Texas	Panicum texanum	Lambsquarters	Chenopodium album
Sandbur, Field	Cenchrus incertus	Pigweed	Amaranthus spp.
Signalgrass	Brachiaria	Puncturevine	Tribulus terrestris
	platyphylla	Purslane	Portulaca oleracea
Sprangletop, Mexican	Leptochloa uninervia	Pusley, Florida	Richardia scabra
Sprangletop, Red	Leptochloa filiformis	Rocket, London	Sisymbrium irio
Witchgrass	Panicum capillare	Shepherdspurse	Capsella bursa-
Woolly Cupgrass	Eriochloa villosa		pastoris
BROADLEAF WEEDS CONTROLLED		Smartweed, Pennsylvania	Polygonum pensylvanicum
Common Name	Scientific Name	Speedwell, Corn	Veronica arvensis
Burweed, Lawn	Soliva pterosperma	Spurge, Annual	Euphorbia spp.
Carpetweed	Mollugo verticillata	Spurge, Prostrate	Euphorbia humistrata
Chickweed, Common	Stellaria media	Woodsorrel, Yellow	Oxalis stricta
Chickweed, Mouseear	Cerastium vulgatum	Velvetleaf (Buttonweed)	Abutilon theophrasti

# COMMERCIAL ORNAMENTAL PRODUCTION

#### GENERAL INFORMATION

Application Use Sites: UP-End can be used in and around field, liner and container ornamental production.

**UP-End** sprays may be used around and over the top of the established plants listed in **Table 4** of this label. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of **UP-End**. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

#### APPLICATION INSTRUCTIONS

**UP-End** will not control established weeds. Therefore, ensure that areas to be treated are free of established weeds at the time of treatment, or **UP-End** may be used together with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in these areas.

The efficacy of **UP-End** will be best if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **UP-End** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, UP-End or UP-End tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from UP-End.

# SPRAYING INSTRUCTIONS

Apply uniformly with properly calibrated ground equipment in suggested spray volumes of 20-200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water.

## INSTRUCTIONS AND RESTRICTIONS1 IN PRODUCTION ORNAMENTALS

Do not apply in greenhouses, shadehouses or other enclosed structures.

Site	Application Instructions and Restrictions
Newly-Transplanted Field-Grown	Do not make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.
Nursery Stock <sup>2, 3</sup>	<ol> <li>Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where UP-End herbicide could come into contact with the roots.</li> </ol>
	3. DO NOT apply during bud swell, bud break or at time of first flush of new growth.
	Direct sprays away from graphed or budded tissue on transplants at all times.
Newly-Transplanted Container-Grown Nursery Stock <sup>2,3</sup>	Do not apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Care must be taken to ensure there are no cracks in the soil where UP-End could come into contact with the roots.
	2. For container grown ornamentals, delay first application of the product to bareroot liners for two (2) weeks after transplanting.
	3. Do not apply during bud swell, bud break or at time of first flush of new growth.
	4. Direct sprays away from graphed or budded tissue on transplants at all times.
Established	Do not apply during bud swell, bud break or at time of first flush of new growth.
Container, or Field- Grown Nursery Stock <sup>2, 3</sup>	Apply as a directed or over-the-top spray.
	3. If newly budded or graphed rootstock, make an application using a shielded sprayer.
	4. Take care to ensure there are no cracks in the soil where <b>UP-End</b> could come into contact with the roots.
Bare Ground for Container Placement	<ol> <li>Apply to soil then water in (including mulch, gravel, wood chips, or other permeable base), replace containerized ornamentals onto pad.</li> </ol>

Plant only those desirable plant species listed on this label into soil treated the previous season with UP-End or injury may occur.

Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing VANTAGE®, Roundup®, Finale®, Ornamec®, Gallery®, Princep®, and other similar products. Do not apply sprays containing Roundup or Finale over the top of ornamental plants.

Before tank mixing, perform a simple jar test to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with UP-End herbicide and follow those that are most restrictive.

#### CHRISTMAS TREE PLANTATIONS

**UP-End** may be used in and around Christmas tree plantations. **UP-End** may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent **UP-End from** directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur. •••

For postemergence control of weeds, use tank-mix combinations of **UP-End** plus VANTAGE Roundup, Finale, or other labeled herbicides. Refer to approved labeling for species information. Determine rates for the tank-mix compounds from the product labels of both **UP-End** and partner herbicides before use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. **IIP-End** plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict **UP-End** usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and

<sup>&</sup>lt;sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1-2 months for plant damage before full-scale application.

<sup>&</sup>lt;sup>3</sup> Do not treat plants grown for food or feed. Do not use treated plants for food or feed.

limitations before use and follow those that Refer to Table 3. Application Rates for Weed Control in Production Ornamentals.

#### VEGETATION CONTROL IN ORNAMENTAL PRODUCTION

UP-End may be used for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. UP-End may be tank mixed with VANTAGE, Roundup PRO, Karmex<sup>®3</sup>, Finale<sup>®4</sup>, diuron, glyphosate or other products to provide bare ground or total vegetation control, or can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Application Rates For Weed Control In Production Ornamentals.

Table 3. APPLICATION RATES FOR WEED CONTROL IN PRODUCTION ORNAMENTALS\*

For preemergence control of the weed species listed, apply UP-End at the following rates:

Length of Control	Product per Acre	Product per 1000 sq. ft.
Short Term Control (2-4 months)	2.1 Quarts	1.6 fl. oz.
Long Term Control (6-8 months)	4.2 Quarts	3.2 fl. oz.

<sup>\*</sup>For extended weed control, repeat applications of UP-End can be made.

## HAND-HELD SPRAY EQUIPMENT:

Use the table above to determine the amount of UP-End to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in MIXING INSTRUCTIONS section of this label.

UP-End will not control established weeds. If weeds germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. Any cultivation must be shallow. UP-End may be used together with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A UP-End treatment may be followed by any registered herbicide to control weeds not listed on the UP-End label.

The efficacy of **UP-End** will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if **UP-End** is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of **UP-End** at the above-specified rates:

#### GRASSES CONTROLLED

Common Name	Scientific Name
Barnyardgrass	Echinochloa crus-galli
Bluegrass, Annual	Poa annua
Crabgrass	Digitaria spp.
Crowfootgrass	Dactyloctenium aegyptium
Foxtail, Giant	Setaria faberi
Foxtail, Green	Setaria viridis
Foxtail, Yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaltata

Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, Browntop	Panicum fasciculatum
Panicum, Fall	Panicum dichotomiflorum
Panicum, Texas	Panicum texanum
Sandbur, Field	Cenchrus incertus
Signalgrass	Brachiaria platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, Red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly Cupgrass	Eriochloa villosa

## BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name	
Burweed, Lawn	Soliva pterosperma	
Carpetweed	Mollugo verticillata	
Chickweed, Common	Stellaria media	
Chickweed, Mouseear	Cerastium vulgatum	
Clover, Hop	Trifolium procumbens	
Cudweed	Gnaphalium spp.	
Eveningprimrose	Oenothera biennis	
Fiddleneck	Amsinckia intermedia	
Filaree	Erodium spp.	
Henbit	Lamium amplexicaule	
Knotweed, prostrate	Polygonum aviculare	
Kochia	Kochia scoparia	
Lambsquarters	Chenopodium album	
Pigweed	Amaranthus spp.	
Puncturevine	Tribulus terrestris	
Purslane	Portulaca oleracea	
Pusley, Florida	Richardia scabra	
Rocket, London	Sisymbrium irio	
Shepherdspurse	Capsella bursa-pastoris	
Smartweed, Pennsylvania	Polygonum pensylvanicum	
Speedwell, Corn	Veronica arvensis	
Spurge, Annual	Euphorbia spp.	
Spurge, Prostrate	Euphorbia humistrata	
Woodsorrel, Yellow	Oxalis stricta	
Velvetleaf (Buttonweed)	Abutilon theophrasti	

# **Table 4. ORNAMENTAL SPECIES**

UP-End herbicide sprays may be used around and over the top of the established plants listed below. Refer to Ornamental Instructions and Restrictions before application. Refer to Table 3. Application Rates For Weed Control Production Ornamentals.

# TREES

Common Name	Scientific Name
Alder, European Black	Alnus glutinosa
Apple	Malus spp.
Arborvitae, American	Thuja occidentalis
Arbutus	Arbutus spp.
Ash, Red	Fraxinus pennsylvanica
Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus grandidentata
Aspen, Quaking	Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra

# TREES (continued)

TREES (continued)		
Common Name	Scientific Name	
Buckeye, Red	Aesculus pavia	
Cedar, White	Thuja occidentalis	
Chamaecyparis, Boulevard	Chamaecyparis pisifera	
Cherry, Black	Prunus serotina	
Cherry, Choke	Prunus virginiana	
Cherry, Kwanzan	Prunus serrulata	
Cherry, Nanking	Prunus tomentosa	
Cottonwood	Populus deltoides	
Crabapple	Malus spp.	
Crepe Myrtle	Lagerstroemia indica	
Cryptomeria, Japanese Cedar		
Cypress, Bald	Taxodium distichum	
Cypress, Leyland	Cupressocyparis leylandii	
Dogwood, Flowering	Cornus florida	
Dogwood, Korean	Cornus kousa	
Dogwood, Silky	Cornus amomum	
Dogwood, Shrub	Cornus spp.	
Elm	Ulmus japonica	
Elm, Winged	Ulmus alata	
Eucalyptus (Silver-dollar) tree	Eucalyptus cinerea	
Fir, Balsam	Abies balsamae	
Fir, Douglas	Pseudotsuga menziesii	
Fir, Fraser	Abies fraseri	
Fir, White	Abies concolor	
Franklinia	Franklinia spp.	
Fringe tree	Chlonenthus retusus	
Ginkgo	Ginkgo biloba	
Gum, Black	Nyssa sylvatica	
Gum, Sour	Nyssa sylvatica	
Haw, Black	Viburnum prunifolium	
Hawthorn	Crataegus spp.	
Hemlock, Canada	Tsuga canadensis	
Hemlock, Eastern	Tsuga canadensis	
Holly, American	Ilex opaca	
Honeylocust	Gleditsia triacanthos	
Lilac, Common	Syringa vulgaris	
Lilac, Japanese Tree	Syringa reticulata •	
Linden	Tilia spp.	
Magnolia, Saucer	Magnolia soulangiana	
Magnolia, Southern	Magnoha grandiflora	
Magnolia, Star	Magnoka stellata	
Maidenhair Tree	Ginkgo biloba	
Maple, Norway	Acer plutanoides	
Maple, Japanese	Acer palmatum	
Maple, Red	Acer rubrum	

Maple, Sugar	Acer saccharum	Tulip tree	Liriodendron tulipifera
TREES (continued)		TREES (continued)	
Common Name	Scientific Name	Common Name	Scientific Name
Nannyberry, Rusty	Viburnum rufidulum	- 252.500.000.000.000.000.000.000.000.000.	- 20.00.00000000000000000000000000000000
Oak, Chinquapin	Quercus	Walnut, Black	Juglans nigra
0.1.11	muehlenbergii	Willow, Weeping	Salix babylonica
Oak, Live	Quercus virginiana	Yellowwood	Cladrastis lutea
Oak, Pin	Quercus palustris	SHRUBS	
Oak, Red	Quercus rubra	Common Name	Scientific Name
Oak, Swamp Chestnut	Quercus michauxii	Abelia, Glossy	Abelia grandiflora
Oak, Water	Quercus nigra	Alder, Witch	Fothergilla gardenii
Oak, White	Quercus alba	Aucuba, Gold	Aucuba japonica
Oak, Willow	Quercus phellos	Azalea	Rhododendron sp.
Olive	Olea europaea	Bamboo, Heavenly	Nandina domestica
Palm, Date	Phoenix spp.	Barberry	Berberis
Palm, Fan	Washingtonia spp.	Barberry	gladwynensis
Palm, Pindo	Butia spp.	Barberry, Japanese	Berberis thunbergii
Palm, Washington	Washingtonia spp.	Blue Indigo Bush	Dalea gregii
Peach	Prunus persica	Bottlebrush, Lemon	Callistemon citrinus
Pear, Bradford	Pyrus calleryana	Boxwood, Common	Buxus sempervirens
	'Bradford'	THE STATE OF THE PARTY OF THE P	The state of the s
Pecan	Carya illinoensis	Boxwood, Japanese	Buxus microphylla
Pine, Austrian	Pinus nigra	Brittlebush	Encelia farinosa
Pine, Italian Stone	Pinus pinea	Buttonbush	Cephalanthus occidentalis
Pine, Loblolly	Pinus taeda	Camellia	
Pine, Monterey	Pinus radiata		Camellia japonica
Pine, Red	Pinus resinosa	Cape Jasmine	Gardenia jasminoide
Pine, Scotch	Pinus sylvestris	Cassia, Feathery	Cassia artemisioides
Pine, Virginia	Pinus virginiana	Cordyline	Cordyline spp.
Pine, White	Pinus strobus	Correa	Correa spp.
Plum, Purple Leaf	Prunus cerasifera	Cotoneaster	Cotoneaster
Poplar, Black	Populus nigra		apiculatus
Redcedar, Eastern	Juniperus virginiana	Cotoneaster, Bayberry	Cotoneaster dammer
Redcedar, Western	Thuja plicata	Cotoneaster, Rock	Cotoneaster
Red Ironbark	Eucalyptus		horizontalis
Red Hollourk	sideroxylon 'Rosea'	Cypress, Italian	Cupressus
Redwood, Dawn	Metasequoia	0 1 1 1	sempervirens
	glyptostroboides	Cypress, Leyland	Cupressocyparis leylandii
Sequoia, Giant	Sequoiadendron	D	
	giganteum	Deutzia, Slender	Deutzia gracilis
Serviceberry	Amelanchier laevis	Dogwood, Red Twig	Cornus sericea
Sourwood	Oxydendrum	Elaeagnus	Elaeagnus ebbingei
	arboreum	Escallonia	Escallonia fradesii
Spruce, Colorado Blue	Picea pungens	Euonymus	Euonymus fortunei
Spruce, Dwarf Alberta	Picea glauca	Euonymus, Golden	Euonymus japonica
	'albertiana'	Euonymus, Winged	Euonymus alata
Spruce, Norway	Picea abies	Firethorn	Pyracantha coccinea
Spruce, White	Picea glauca	Forsythia, Border	Forsythia intermedia
Sweetgum	Liquidambar	Fragrant Olive	Osmanthus fragrans
	styraciflua	Fuschia, California	Zauschineria
Sycamore	Platanus occidentalis		californica
Trachycarpus	Trachycarpus spp.	Gardenia	Gardenia jasminoide.

Hawthorne, Indian	Raphiolepis indica	P
Hibiscus	Hibiscus syriacus	Q
Holly, Chinese	Ilex cornuta	R
SHRUBS (continued)		-
Common Name	Scientific Name	SI
Holly, Japanese	Ilex crenata	-
Holly, Fosters	Ilex attenuata 'Fosteri'	$\frac{\mathbf{C}}{\mathbf{r}}$
Holly, Savannah	Ilex attenuata	R
Holly, Yaupon	Ilex vomitoria	R
Honeysuckle, Bush	Diervilla lonicera	R
Hopseed Bush	Dodonaea viscosa	R
Hopbush	Dodonaea viscosa	Sı
Hydrangea	Hydrangea	Sı
	macrophylla	Sı
Juniper	Juniperus sp.	Sı
Juniper, Chinese	Juniperus chinensis v. pfitzer	S
Juniper, Shore	Juniperus conferta	V
Juniper, Trailing	Juniperus horizontalis	V
Laurel, Cherry	Prunus laurocerasus	V
Laurel, Mountain	Kalmia latifolia	W
Laurel, Otto Luyken	Prunus laurocerasus	W
Laurel, Schipka	Prunus schipkanensis	W
Laurustinus	Viburnum tinus	X
Lavender, English	Lavandula	Y
	angustifolia	Y
Leucothoe	Leucothoe	Y
	fontanesiana	Y
Leucothoe, Coast	Leucothoe axillaris	
Lilac, Cut-leaf	Syringa laciniata	Y
Lily-of-the-Nile	Agapanthus africanus	Y
Mahonia	Mahonia aquifolium	*
Mock Orange	Pittosporum tobira	
Myrtle, Compact	Myrtus communis	G
Myrtle, Wax	Myrica cerifera	2 200
Nandina	Nandina domestica	C
Oleander	Nerium oleander	A
Oregon Grape	Mahonia aquifolium	В
Osmanthus	Osmanthus fragrans	В
Palm, European Fan	Chamaerops humilis	C
Palm, Mediterranean Fan	Chamaerops spp.	C
Phlox, Prickly	Leptodactylon	C
Ol Alair E	californicum	D
Photinia, Fraser	Photinia x Fraseri	D
Pieris, Japanese	Pieris japonica	D
Pine, Mugo	Pinus mugo	0
Plum, Natal	Carissa grandiflora	G
Privet, California	Ligustrum ovalifolium	Ic
Privet, Glossy	Ligustrum lucidum	Iv
Privet, Variegated	Ligustrum sinensis	Iv

Pyracantha	Pyracantha coccinea
Quince, Flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens

# SHRUBS (continued)

Common Name	Scientific Name
Redroot	Ceanothus spp.
Rhododendron	Rhododendron spp.
Robira	Pittosporum tobira
Rose	Rosa spp.
Spice Plant	Illicium parviflorum
Spiraea	Spiraea vanhouttei
Spiraea, Anthony Waterer	Spiraea X bumalda
Spiraea, Japanese	Spiraea japonica
Sweet Bay	Laurus nobilis
Trumpet Bush	Tecoma stans
Verbena, Lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild Lilac	Ceanothus spp.
Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern*	Podocarpus macrophyllus
Yucca, Adam's Needle	Yucca filamentosa
Yucca, Weeping	Yucca pendula

<sup>\*</sup> Do not apply **UP-End herbicide** during spring growth or injury to terminals may occur.

# GROUND COVERS

	2010 1020 10
Common Name	Scientific Name
Ajuga	Ajuga reptans
Baby Sun Rose	Aptenia cordifolia
Beach Strawberry	Fragaria chiloensis
Capeweed	Arctotheca calendula
Cinquefoil, Spring	Potentilla verna
Coyotebrush, Dwarf	Baccharis pitularis
Daisy, Trailing African	Osteospermum fruticosum
Dymondia	Dymandia nargatetae
Gazania	Gazania splendens
Iceplant, Large Leaf	Carpobrotus edulis ••
Ivy, English	Hedera helix
Ivy, Geranium	Pelargonium peltatum
Jasmine, Asiatic	Trachelospermum asiaticum

Jasmine, Primrose	Jasminum mesnyi
Jessamine, Carolina	Gelsemium
	sempervirens
Manzanita, Bearberry	Arctostaphylos
	uva-ursi

# GROUND COVERS (continued)

Common Name	Scientific Name
Miscanthus	Miscanthus spp.
Mondograss	Ophiopogon japonica
Morning glory	Convolvulus spp.
Myoporum	Myoporum parviflolium
Pachysandra	Pachysandra terminalis
Potentilla	Potentilla fruticosa
Red Apple	Aptenia cordifolia
Rosemary	Rosemarinus officinalis
Rose-Of-Sharon	Hypericum calycinum
Sand Strawberry	Fragaria chiloensis
Sedum	Sedum spurium
St. Johnswort, Creeping	Hypericum calycinum
Stonecrop	Sedum spurium
Verbena, Peruvian	Verbena peruviana
Vervain	Verbena peruviana
Vetch, Crown	Vicia sativa
Vinca	Vinca minor
Wintercreeper	Euonymous fortunei

# PERENNIALS

Common Name	Scientific Name
Acacia	Acacia redolens
Asparagus	Asparagus spp.
Aster, New York	Aster novi-belgii
Aster, Stokes	Stokesia laevis
Astilibe (False Spirea)	Astilibe spp.
Avens	Geum triflorum
Baby's Breath	Gypsophila elegans
Baby's Breath	Gypsophila paniculata
Beard-Tongue	Penstemon spp.
Bellflower	Campanula spp.
Bellflower, Willow	Campanula persicifolia
Bird of Paradise	Caesalpinia pulcherrima
Black-eyed Susani	Rudbeckia hirta
Blanket Flower	Gaillardia aristata
Blanket Flower	Gaillardia x grandiflora
Bleeding Heart	Dicentra spectabilis
Butterfly Weed	Asclepias tuberosa

California Poppy	Eschscholzia california
Calla Lily	Zantedeschia aethiopica
Canna, Common Garden	Canna generalis 'Lucifer'

# PERENNIALS (continued)

Common Name	Scientific Name
Carex	Carex spp.
Chincherinchee	Ornithogalum thyrsoides
Clover, Crimson†	Trifolium incarnatum
Columbine	Aquilegia 'McKana Giant'
Columbine	Aquilegia x hybrida
Coreopsis (tickseed)†	Coreopsis lanceolata
Crinum Lily	Crinum spp.
Crocus	Crocus spp.
Daffodil	Narcissus spp.
Daylily	Hemerocallis spp.
Fairy Duster	Calliandra eriophylle
Fern, Asparagus	Asparagus officinalis
Fern, Boston	Nephrolepis exaltata
Fern, Hay-scented	Dennstaedtia punctilobula
Fern, Leatherleaf*	Rumohra adiantiformis
Fortnight Lily	Moraea spp.
Foxglove	Digitalis purpurea
Freesia	Freesia x hybrida
Gaillardia	Gaillardia pulchella
Geum	Geum spp.
Gladiolus	Gladiolus spp.
Heather, Dwarf	Calluna vulgaris
Hosta	Hosta spp.
Indian Blanket†	Gaillardia pulchella
Iris, Japanese	Iris kaemphera
Lantana, Weeping	Lantana montevidensis
Leopards Bane	Doronicum cordatum
Lily	Lillium spp.
Liriope, Big Blue	Liriope muscari
Liriope, Creeping	Liriope spicata
Liriope, Variegated	Liriope muscari
Moonbeam	Coreopsis verticillata
Montbretia	Crocosmia
	crocosmiiflora
Mugwort, Western	Artemesia
	ludoviciana
Nightshade	Solanum spp.
Orchid, Peacock	Acidanthera bicolor

Oxeye Daisy†	Chrysanthemum leucanthemum	
Palm, Areca	Chysalidocarpus lutescens	
Palm, Pygmy Date	Phoenix roebelence	
Palm, Washington	Washington robusta	
Peony, Chinese	Paeonia lactiflora	
Purple Coneflower†	Echinacea purpurea	

# PERENNIALS (continued)

Common Name	Scientific Name	
Purple Gay-feather	Liatris pycnostachys	
Purple Loosestrife	Lythrum virgatum	
Rodgersia	Rodgersia henricie	
Rosemary	Rosmarinus officinalis	
Sedge	Carex spp.	
Shasta Daisy†	Chrysanthemum x superbum	
Statice	Limonium latifolia	
Statice, German	Goniolimon tartaricum	
Sweet Flag	Acorus calamus	
Tickseed†	Coreopsis lanceolata	
Texas Bluebonnet	Lupinus texenis	
Tulip	Tulipa spp.	
Wonder Flower	Ornithogalum thyrsoides	
Yarrow†	Achillea millefolium	
Zephyr Lily	Zephyranthes spp.	

<sup>\*</sup> Applications of **UP-End herbicide** to immature ferns (during periods of new growth of fronds) may result in some injury.

## ORNAMENTAL GRASSES

Common Name	Scientific Name	
Beach Grass	Ammophila breviligulata	
Fescue, Blue	Festuca glauca	
Fescue, Sheep	Festuca ovina	
Fountain Grass	Pennisetum setaceum	
Pampas Grass	Cortaderia selloana	
Reed Canary Grass	Phalaris arundinacea	
Reed, Giant	Arundo spp.	
Ribbon Grass	Phalaris arundinacea	
Tufted Hair Grass	Deschampsia caespitosa	

## BEDDING PLANTS

Scientific Name	
Ageratum houstonianum	
Alyssum saxatile	
Anemone coronaria	
Artemesia spp.	
Platycodon grandiflorum	
Begonia spp.	
Brassica olereacea	

# **BEDDING PLANTS (continued)**

Common Name	Scientific Name	
Caladium	Caladium spp.	
Cast-Iron Plant	Aspidistra elatior	
China Aster*	Callistephus chinensis	
Crocosmia, Montebretia	Crocosmia x crocosmiiflora	
Dahlia*	Dahlia spp.	
Dianthus	Dianthus barbatus	
Dusty Miller	Senecio cineraria	
Gayfeather	Liatris spp.	
Gazania, Treasure Flower	Gazania rigens	
Gazania, Trailing	Gazania rigens leucolaena	
Gloxinia	Gloxinia simningia	
Kale, Ornamental	Brassica napus	
Marigold, African	Tagetes erecta	
Moss Rose*	Portulaca grandiflora	
Mum, Garden	Chrysanthemum spp.	
Periwinkle*	Vinca major	
Periwinkle, Rose	Catharanthus roseus	
Petunia*	Petunia spp.	
Plumosa Cockscomb	Celosia cristata	
Portulaca*	Portulaca grandiflora	
Salvia*	Salvia splendens	
Snapdragon	Antirrhinum majus	
Statice*	Limonium spp.	
Sweet William	Dianthus barbatus	
Vinca*	Vinca major	

\* Do not apply **UP-End** sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.

UP-End herbicide may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of such plants at the specified rate. Evaluate treated plants 1-2 months following treatment for possible injury.

<sup>\*</sup> These plants have shown tolerance to UP-End applications of 4.2 pints (2.1 quarts) in wildflower plantings established from seed.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** DO NOT STORE BELOW 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse after emptying, then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Containers less than or equal to 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Containers larger than 5 gallons: triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on it end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

# IMPORTANT INFORMATION READ BEFORE USING PRODUCT

### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE**: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE CSE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

United Phosphorus and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

DRIVE, ARSENAL, SAHARA, PLATEAU and VANTAGE are registered trademarks of BASF Corporation.

AquaCap is a trademark of BASF Corporation.

Roundup and Roundup PRO are registered trademarks of Monsanto Company.

Karmex and Oust are registered trademarks of E. I. duPont de Nemours and Company.

.....

Finale is a registered trademark of Bayer AG.

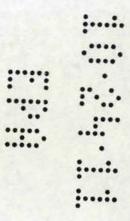
Ornamec and Trimec are registered trademarks of PBI Gordon Corp.

Three Way is a registered trademark of Lesco Technologies, LLC.

Gallery is a registered trademark of Dow AgroSciences.

Princep is a registered trademark of Syngenta.

Rev. 7/12/10



# Material to be added to an e-Jacket

Reg. No.	1/0506-250
	D# 425342
1.Placement with	hin the e-Jacket:
Default: chrono Other: (PDF pag	ological top ge number, i.e., "before page 45")
2.Is this materia	
Notification	amped accepted label
New CSF	
<sup>1</sup> Final Prin	ted Label
Other:	

3.Attach this notice on top of the material. It must be clipped all together, NOT STAPLED. Then give the material with this coversheet to staff in the Information Services Center (Room 230).

Reviewe	er's Name: P	nil Errica	0
Phone:	305-6663	_ Division: _	RD
Date: _	10/18/10		